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ABSTRACT

This document is the first volume of a projected quarterly publication designed to assure that the most current information, both on the latest research and on successful practices in the field of gifted education is made available to schools as quickly and efficiently as possible. The four issues of this volume contain the following articles: "Developing Defensible Identification Procedures" (Tommie Sue Anthony); "A Holistic Approach to the Identification of Gifted Youth" (Mary M. Keller); "Using Product Portfolios for Student Assessment for Gifted Programs" (Julie Duncan and Edie Dougherty); "Identification of Gifted/Talented Students: Questions and Answers" (Evelyn Hiatt and Jeanette Covington); "Developing Curriculum for Gifted/Talented" (James L. Coffey); "Multidisciplinary Programs at the Elementary Level" (Michele J. Riojas); "Developing Student Objectives That Are Differentiated for Gifted/Talented Students" (Judith L. Martin); "An Interdisciplinary Unit on Environmental Studies" (a unit based on a program developed by Tom Weldon and adapted for use in Texas schools by Betty Strickland); "Curriculum Development: Questions and Answers" (Evelyn Hiatt and Jeanette Covington); "Eliminating Four Barriers to the Identification of Gifted Minority Students" (Mary Frasier); "Gifted Learning Disabled Students: Questions and Answers" (Anne J. Udall); "The Bilingual Gifted: Viable Strategies for Effective Programming" (Mary T. Kolesinski); "An Update on the Javits Project: Identifying and Serving Disadvantaged Gifted Youth" (Evelyn L. Hiatt); "Identifying and Serving Diverse Populations: Questions and Answers" (Evelyn Hiatt and Jeanette Covington); "Evaluating Programs for the Gifted" (Carolyn M. Callahan); "Issues Related to Grouping and Gifted Education" (Kathy Hargrove); "Thematic-Based Curriculum: The Key to Connected Learning" (Violet Henney and Nora Woods); "Elements of a Quality Staff Development Program" (Susan Johnsen); "Developing a Scope and Sequence for Gifted/Talented Education" (G. Wayne Craigen and Adelle McClendon); and "Questions and Answers: Administrative Issues" (Evelyn Hiatt and Jeanette Covington). (DB)

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UPDATE ON GIFTED EDUCATION

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UPDATE
ON
GIFTED EDUCATION

April 1991

A Publication of the
Division of Gifted/Talented Education
Texas Education Agency

FOREWORD

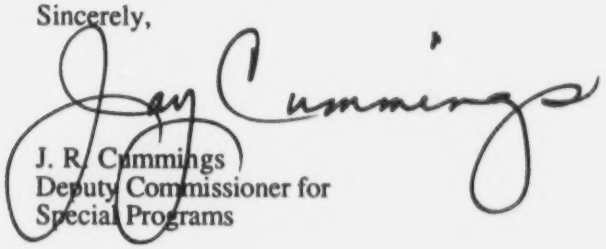
In 1990, the mandate for identifying and serving gifted youth was inaugurated in Texas. Any transition is difficult, and this one was no different. As local districts moved from voluntary programs that may have served only a few grades to comprehensive services in kindergarten through grade twelve, the need for more information was evident.

The Texas Education Agency seeks to assist districts in developing exemplary programs for all their students. To do this, it must assure that the most current information, both on the latest research and on successful practices, is made available to schools as quickly and efficiently as possible. This issue of *Update on Gifted Education* is the first of what, hopefully, will be a quarterly publication on developments in this exciting area of education. While this issue focuses on issues relating to identification, future volumes will deal with areas such as teacher and staff training, curriculum development, program models, and program evaluation.

In most cases, authors of the articles will be Texas educators who have experience in working with gifted students. Other articles by educators and consultants of national reputation will supplement the efforts of our own local experts. Additionally, in the first several issues, there will be a question and answer section that focuses on specific topics. In this quarter's publication, the question and answer section deals with identification and should provide some guidance in complying with both legislative requirements and State Board of Education rules.

It is hoped that this publication will serve as a guide in the development of district level programs for gifted students. If there are suggestions for improving it or recommendations regarding the inclusion of certain topics in future issues, please contact the Division of Gifted/Talented Education at 512/463-9455. We look forward to working with you to build a strong program for gifted students in Texas.

Sincerely,



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This publication was developed by Agency staff members in the Office of the Deputy Commissioner for Special Programs.

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INTRODUCTION

This issue of *Update on Gifted Education* focuses on the topic of student identification for gifted programs. It offers both a theoretical underpinning for the identification process and practical suggestions based on the experiences of Texas educators.

The first article, "Developing Defensible Identification Procedures," is by Tommie Sue Anthony, who coordinates the program for gifted students in Pulaski County, Arkansas. Ms. Anthony has appeared in federal court to explain district identification policies and has first hand experience at building an identification procedure that is both educationally and legally defensible.

Mary Keller's article, "A Holistic Approach to the Identification of Gifted Youth," offers one district's approach to defensible identification of students. Dr. Keller, Assistant Superintendent for Instruction in Denver City Independent School District, Denver City, Texas, suggests that a comprehensive, child centered procedure has several advantages, both for the professionals who participate in the process and for the students who are being assessed.

The third article, "Using Product Portfolios for Student Assessment for Gifted Programs," by Julie Duncan and Edie Dougherty of Lubbock Independent School District, provides information on using non-traditional assessment measures as part of the identification process. Lubbock I. S. D. has been identifying and serving kindergarten and primary aged gifted students for several years and has modified a procedure originally developed by the Texas Education Agency as part of the Chapter 2 project, Institutes for Teachers of the Disadvantaged Gifted. Lubbock successfully incorporates a Product Portfolio into its identification procedure and finds it to be a useful tool in teacher assessment of student potential.

A question and answer section on issues relating to State Board rules on student identification concludes this issue. These were developed in response to frequently asked questions from school district personnel and parents of gifted youth. Should there be questions on identification that are not covered, please submit them in writing for response in future issues.

Evelyn Levsky Hiatt and Jeanette Covington, Co-editors

Developing Defensible Identification Procedures

Tommie Sue Anthony
Coordinator, Gifted Programs
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Developing programs for the gifted can be exciting, challenging, and satisfying. While developing curriculum, units of study, and enrichment activities that challenge and stimulate bright young minds takes time and effort, it basically is not difficult. In contrast, developing defensible identification procedures and practices is neither easy nor fun, and sometimes it can be unpopular. Yet, if programs for the gifted are to survive in the twenty-first century, identification procedures must be defensible.

"Defensible identification procedures" does not mean establishing a cut-off score on a standardized achievement test or on an individual intelligence test, nor does it mean explaining why a child is not placed in a program by saying, "We used the such-and-such test and your child did not make the designated score." It does not mean justifying the underrepresentation of minority students in the program by saying, "Those students don't score well on tests." Instead, the phrase means procedures and policies that allow minority students, underachievers, and handicapped students to be identified and served. It means developing practices and procedures that can disprove charges of "elitism" or "discrimination." It means developing identification procedures that match the program model. Most of all, it means recognizing that rigid identification procedures can unintentionally exclude many gifted students from special populations and making the commitment that the goal of identification is to include children rather than to exclude them.

How then, may a school system develop defensible identification procedures? First, the district must recognize that school systems sometimes present enormous barriers to identifying gifted minority students. Some of these barriers, outlined by Passow (1986), are:

- Attitudes and expectations of educators who often do not believe there is giftedness in culturally different populations.
- Over-reliance on intelligence tests that focus mainly on the absorption of facts and the systematic processing of those facts in predetermined ways as the prime criterion for identification.
- Rigid learning environment, in which the diverse skills and interests and kinesthetic modes of expression that many culturally different children have are frequently ignored or discouraged.
- Failure to provide the necessary general education, basic skills foundation, and learning-to-learn skills that are required for the further development of specialized talents.
- Failure to create a learning environment and a climate for achievement in which attention is given to both the affective and cognitive elements of talent development.
- Failure to select, assign, and provide appropriate inservice education to teachers, counselors, administrators and other educators who must create conditions for learning and who, by serving as the gatekeepers for programs and services, play critical roles in developing talent.
- Failure to help culturally different students enhance their self-esteem and recognize that a low self-concept and a built-in expectation of failure are often evident in minority children because of the systematic and long-term discrimination they and their families have experienced.
- Failure to provide appropriate guidance and other support services.

By recognizing these barriers, openly discussing them, and working to eliminate them,

school systems can take a big step toward developing defensible identification procedures.

Second, school systems must recognize that as much diversity of talent exists within the gifted population as does within the general population. Not all gifted students make good grades or get high scores on standardized tests. This means no one program option can meet the needs of all gifted students and that school systems should provide a variety of program options. Many gifted students, particularly minority students, may be excluded from a single option program if that option does not match their talent or strength. For instance, if English or advanced mathematics is the only option available at the secondary level, then gifted students who are not mathematically talented or students who do not speak standard English may be excluded. School systems that are truly committed to establishing defensible identification procedures also will commit to providing a variety of options so that a variety of gifted students rather than a small group who possess a common talent or trait, can be served.

Third, school systems should include the following practices in their identification procedures.

1. School systems should seek nominations for the program from a variety of sources - parents, teachers, community leaders, peers, self, librarians. Systems should encourage nominations, and the community should be aware of the nomination procedures. Schools could send letters to parents asking them to nominate their children. Also, personnel could speak to community groups, including church groups, about the program.

2. Gifted program personnel should monitor the nominations to insure that disadvantaged minority students are nominated. If they are not nominated, then personnel should solicit nominations. It is logical that if students are not nominated, then they certainly will not be placed in a program for the gifted. Also, school personnel and the community may need to be informed about the behavioral characteristics of both majority and minority gifted students.

3. School systems should use multiple sources of data rather than relying solely on test scores. Student interviews, parent questionnaires, samples of student work, and anecdotal records are all sources of valid information that should be used. A defensible rule is, "No one score puts a child in, and no one score keeps a child out." Systems must also determine if there is a disparity between the test scores of students from different populations or socio-economic groups. It is imperative that screening committees know about the disparity, know how great it is, and know why it exists. This knowledge will put test scores in a different light and will help staff to spot students with potential.

4. The selection process should be done by a trained committee rather than an individual. The committee should reflect the racial composition of the school, and the committee should be very knowledgeable about indicators of giftedness. The use of a culturally diverse committee of knowledgeable educators will do more to reduce charges of elitism than almost anything else.

5. School systems should make sure that the community is aware of the identification procedures. Identification should not be a secret, mysterious happening. Many minority groups view gifted programs negatively, and systems must make an effort to change these perceptions. Publicly discussing procedures and answering questions about the program may help to change these negative perceptions among minority groups.

Finally, the best way to develop defensible identification procedures is to follow Fraiser's (1987) "best practices" in identification.

1. The focus is on the diversity within gifted populations. The gifted are not a homogeneous group nor do they express their talents in the same way.

2. The goal of identification is inclusion rather than exclusion of students.

3. Data are gathered from multiple sources; a single criterion of giftedness should be avoided.

4. Both objective and subjective data are collected.

5. Professionals and nonprofessionals who represent various areas of expertise and who are knowledgeable about behavioral indicators of giftedness are involved in the identification process.

6. Identification of giftedness occurs as early as possible, consists of a series of steps, and is continuous.

7. Special attention is given to the different ways in which children from different cultures manifest behavioral indicators of giftedness.

8. Decision-making is delayed until all pertinent data on a student has been reviewed.

9. Data collected during the identification process are used to help determine the curriculum.

By following Frasier's "best practices," insuring that disadvantaged minority students are nominated, using multiple sources of information, providing extensive inservice to all staff members, and developing community awareness and support, school systems can develop defensible identification procedures without eroding the quality of the program. In the coming years programs for the gifted must include greater numbers of children from economically and culturally different groups. Defensible identification procedures will allow this to happen. Without these defensible identification practices, programs for the gifted may not survive in the 1990s and beyond.

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"The problem of gaining support for educating 'gifted' students in the United States is essentially not an instructional problem; it is a values problem. Unless we understand that fact, we can find ourselves believing that we are arguing about technical issues of identification, acceleration, and grouping when what we are really in dispute about are our societal and personal values."

James J. Gallagher
Educational Reform, Values, and Gifted Students

A Holistic Approach to the Identification of Gifted Youth

Mary M. Keller
Assistant Superintendent for Instruction
Denver City Independent School District
Denver City, Texas

A holistic approach to identification of gifted and talented youth is a process worthy of consideration for three reasons:

- it is congruent with the new directions and refinements emerging in education that emphasize quality, performance, and participation;
- it is purposefully and openly concerned with the ethical reasoning, reflection, and actions directly related to appropriate program access; and
- it is an alternative to the matrix that makes maximum use of empowered committees.

Senate Bill 1 requires that schools involve teachers as decision-makers and that parents and community members work with the school as authentic partners. The holistic method of identifying potentially gifted students is one forum for including people in a child-sensitive process.

The ethical issues, requisite to the holistic approach, focus around an inclusive philosophy and process. The procedure, therefore, becomes a vehicle for translating philosophy into intentionally reflective collegial actions. Strike, Haller, and Soltis (1988) referred to a deliberate reflection-action process as the "application of principle to cases. Applying moral principle to cases requires expressing and clarifying the principles and finding out the relevant facts about the cases" (p.4). In the holistic approach, empowered committees examine both the qualitative and quantitative evidence for individual students, on a case by case basis. Thus, this committee-driven process provides a thoughtful template for the expression, clarification, and discernment of salient information.

A holistic approach for identification of gifted youth merges measurement-driven, process or quantitative procedures, with nuance-driven or qualitative methodologies. The most striking benefit of a holistic process; therefore, becomes the integration of both deductive and inductive processes into a new context for identifying and serving gifted students. This integrated quantitative/qualitative system actually begins a consistent commitment to process, product, and content with the identification phase.

Becoming more than a mere euphemism, the tripartite link to process, product and content underscores the critical issue. Test scores are, in and of themselves, inadequate. The holistic context, therefore, is in accord with recommendations put forth by the National Commission on Testing and Public Policy (1990) which states:

> test scores are imperfect measures and should not be used alone
>
> to make important decisions about individuals, groups, or institutions;
>
> in the allocation of opportunities, individuals' past performance
>
> and relevant experience must be considered. (p.9)

Denver City ISD's holistic model, as described in this article, is only one adaptation of the process. The holistic process, in current use in Denver City, functions through the use of four committees that operate in a two-tiered committee structure. The first tier in the committee structure is the elementary and secondary screening committees. The single committee membership limitation, along with the dual structure of separate

screening and selection committees, innately provides a secure, double-blind check and balance system to the nomination, screening, and selection process.

Nomination

Nominations for Denver City's gifted program are gathered from ***all*** professional staff members during the months of October, January, and April. During the periods open for nomination ***any*** professional staff member may nominate ***any*** student (kindergarten through grade 12). Nominations are accepted from parents at any time during the year. It is the intent of this "casting out of the net" to gather as many potential candidates as possible, the screening and selection phases narrow the candidate pool.

In the process of "casting out the net," the October nomination period is considered the most intensive collection of potential candidates. The later two nomination periods are intended to open the window of opportunity for new students, or for students who have re-emerged in the process as a result of an accumulation of nominations.

The nomination phase can be summarized as follows:

- The "Professional Screening Instrument," listing and describing gifted characteristics is given to certified staff. This document does not ask the staff member to name him/herself, rather, it asks the nominator to indicate his/her relationship to the child. The relationship request is a significant issue in the nomination phase. An inclusive process is one that is sensitive to the manifestation of giftedness in both school and non-school environments. The relationship categories included on the "Professional Screening Instrument" are: current teacher, former teacher, other professional (such as principal, counselor, nurse), friend of child (such as Sunday school teacher, scout leader, neighbor), relative (other than parent), or other relationship.

- In order to assist parents in the nomination of their children, the district provides parent training sessions discussing characteristics of potentially gifted youth and the procedure for completing the "Parental Nomination Form."

- In grades six through twelve, students are allowed to nominate either themselves or their peers.

- In the elementary grades, a series of demonstration lessons, taught by the elementary gifted and talented (gifted) consulting teacher, are designed to free classroom teachers to observe their students in a controlled situation which emphasizes either creative productive thinking or logical problem solving. These demonstration lessons serve a two-fold purpose: first, to allow classroom teachers the freedom to observe and record the interactions and responses of individual students; and second, to provide a relevant forum for the modeling of creative/higher level strategies for all students.

The information gathered by the classroom teacher from the demonstration lessons is not only useful evidence for nomination; it can be added later to the candidate profiles during the selection phase.

Screening

Both the elementary and the secondary screening committees are made up of four to five teachers and at least one parent. It is critical that all committee members receive intensive training in the characteristics of potentially gifted students, in the overall philosophy and process for holistic identification, and in the specific responsibilities and purpose of the screening committee.

It is as fundamental at the screening phase as it is at the selection phase that committees are authentically and knowledgeably empowered through both precision training and genuine authority to make decisions. Parents serving on either the screening or selection committees have proven to be valued sources of diverse and insightful points of view.

District gifted consulting teachers facilitate the screening committees; however, neither they nor any administrator hold committee membership or decision-making rights.

Screening Phase

PROFESSIONAL SCREENING INSTRUMENT

Student's Name	1.	2.	3.	4.	5.	6.	7.

Relationship to Child		
Current Teacher (Grade)		
Former Teacher (Estimated Grade Now)		
Other Professional (Specify:)	(Estimated Grade Now:)	
Friend (to the child, not the parents)	(Estimated Grade Now:)	
Relative (Specify:)	(Estimated Grade Now:)	
Other:	(Estimated Grade Now:)	

Articulate	1.	Has unusual advanced vocabulary for age; can communicate well.
Knowledgeable	2.	Asks many questions in class; may read independently on interests rather than complete assigned work.
Good Memory	3.	Acquires basic skills rapidly; if not stimulated may become discipline problem; absorbs difficult material quickly.
Inquisitive	4.	Enjoys discussions which examine the why's and how's; may challenge teacher statements; can solve unique problems.
Conceptual Understanding	5.	Reasons things out; may not see the need to master skills and prefers to spend time thinking; enjoys challenging problems.
Perceptiveness	6.	Understands purposes; keen and alert observer; frustrated with unaware peers.
Reading Maturity	7.	Reads well and can comprehend at a higher level than peers; may show preference for biography, encyclopedias, etc.
Analytical Reasoning	8.	Comprehends advanced abstract ideas and concepts easily; impatient with drill activities; enjoys intellectual challenge.
Task Commitment	9.	Spends much longer periods of time on topics than peers; sometimes difficult to get him to move on to another topic.
Self-Motivated	10.	Seems to be a self starter; questions in order to learn more; may resist work that is not considered exciting.
Perfectionist	11.	Attention to detail and refining products; frustrated with his work; may tend to give up if success is too late in coming.
Self-Direction	12.	Prefers to work independently; may resist group activities; takes time alone to think through problems.
Maturity of Interests	13.	Aware of current events and their effect; may have own uniqueness which leads to feelings of loneliness.
Methodical	14.	Likes to organize and bring structure to things; people and situations; may be domineering or "bossy."
Curiosity	15.	Displays a great deal of curiosity about many things; constantly asking questions.
Fluency	16.	Generates a large number of ideas or solutions to problems and questions; offers unusually clever responses.
High Risk Taker	17.	Is adventurous and speculative; sometimes gets into a "bind" because of this.
Imaginative	18.	Displays a good deal of intellectual playfulness; fantasizes; concerned with adapting, improving, and modifying objects, etc.; "I wonder..."
Sense of Humor	19.	Displays a keen sense of humor in situations that may not appear humorous to others; laughs at jokes peers do not understand.
Sensitivity	20.	Unusually aware of his own impulses; sensitive to emotions and beauty; attends to aesthetic characteristics.
Individualistic	21.	Nonconforming; accepts disorder; not interested in detail; has no fear of being different.
Critical	22.	Criticizes constructively; unwilling to accept authoritarian situations without critical examination; sometimes seen as obnoxious.

The responsibilities and procedures for the screening committee(s) can be outlined as follows:

- to document on the "Student Screening Card" all nominations from professionals, parents, self, or peers for each individual student nominated. The documentation process includes the tallying and recording of individual responses from the "Professional Screening Instrument," parent nominations, and self or peer nominations at the secondary level.

- to use additional sources to add quantitative and demographic data to the "Student Screening Card" or create a new card for a student using the collective evidence from additional data sources. The additional data sources made available to the committee(s) include:

  ••standardized norm-referenced test scores,
  ••bilingual or ESL eligibility,
  ••free/reduced lunch eligibility, and
  ••TEAMS/TAAS written composition scores.

- to check that all "Student Screening Cards" are complete and to rank order these cards from high to low based upon nomination density and additional data sources.

- to consider the preponderance of the evidence and choose candidates for the selection phase. Decisions for candidate status are made collaboratively by the committee strictly under a majority vote rule. (See Figure 1.)

With practice, screening committees become increasingly more confident in their ability to rank the "Student Screening Cards" and to detect natural breaks between those students who will remain at the screening phase and those students who will progress to the selection phase as program candidates.

Selection

After the screening committee has determined which student candidates should progress to selection, the gifted consulting teacher obtains permission from the parents to begin appropriate testing and data gathering. The consultant then initiates a candidate profile containing subjective and objective data composed of products, work samples, results of teacher observations, student contributions, an indepth parent inventory, a structured student interview, creativity assessments, and assessments of general intellectual ability.

The gifted consultants prepare for the selection committee statistical information compiled from locally normed composite quantitative data. The selection committee sees these grade level statistics in both aggregated and disaggregated by sex and ethnicity form.

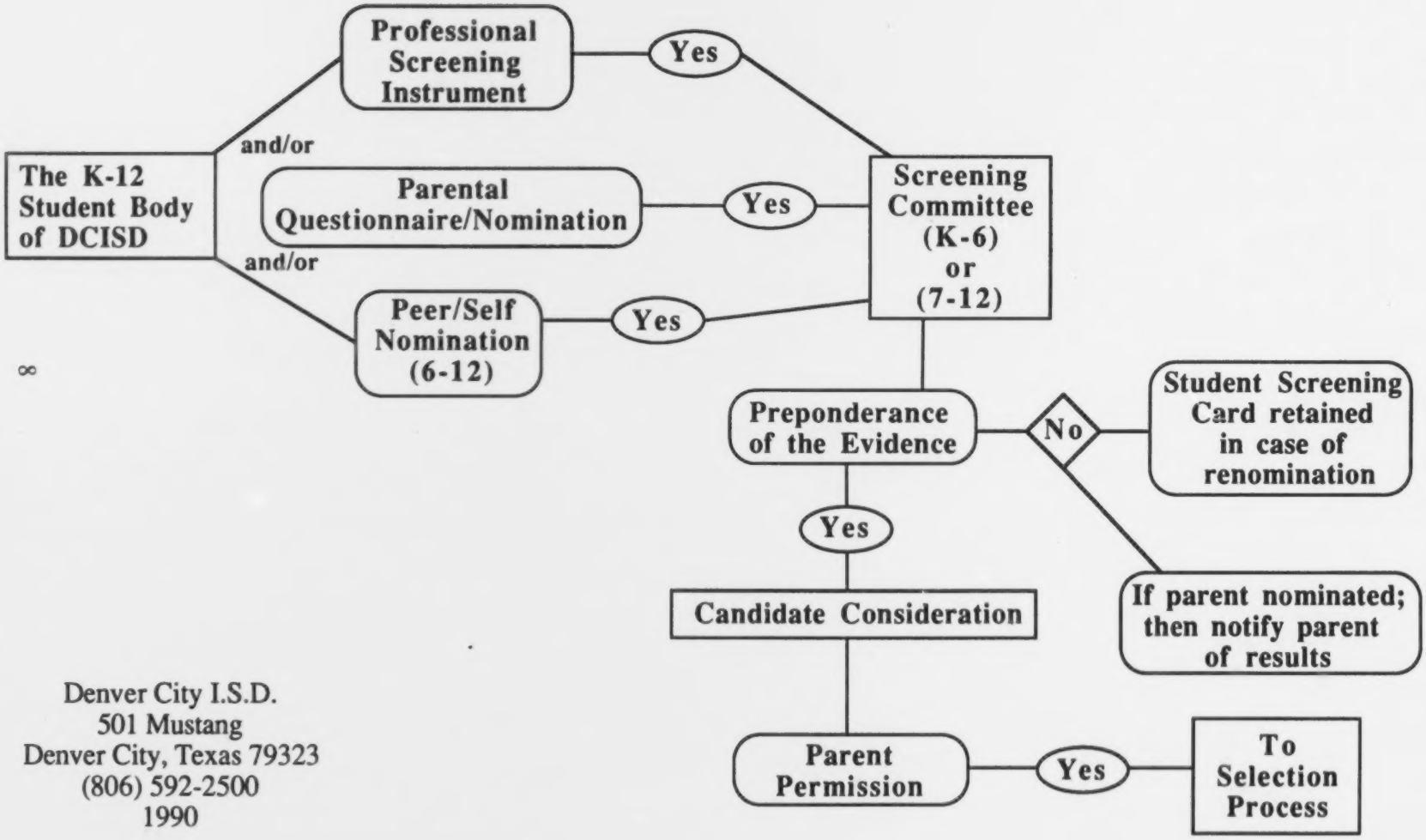
The K-6 and 7-12 selection committees are composed of from four to eight teachers and at least one parent. Gifted consultants and district administrators may not be selection committee members. Like the screening committee, selection committee members receive extensive training in characteristics, identification process, and committee responsibilities. The selection committee, elementary or secondary, convenes after the gifted consulting teacher(s) has completed all individual candidates profiles and has prepared all the statistical information. Using a case by case process the gifted consulting teacher presents each candidate's profile to the committee. Student candidates are identified only by code numbers. The selection committee is given non-identifying demographic information on candidates as a part of the presentation process. As in the screening committee, a selection committee member must withdraw when a student being considered is related to him/her or recognized despite the coding.

It is essential that the consultant presents the selection committee with all subjective or qualitative information contained in the candidate's profile ***before*** sharing the objective or quantitative data. The reflective examination of subjective data must be the initial impression the committee receives because of the tendency of committee members to emphasize test results to the exclusion of the equally powerful qualitative data.

After reflection, discussion, and discerning relevant facts, the committee examines each candidate's potential from a "big picture"

FIGURE 1

SCREENING PROCESS



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perspective. The selection committee ultimately arrives at a program placement majority decision based upon the preponderance of the evidence. Both screening and selection committees are instructed that if a decision is in doubt to vote for the inclusion of the child in the program.

The selection committee's collaborative decision is neither made under the confines of participation quota nor under the predetermined restraints of cut-off scores.

In deciding placement the selection committee may choose from one of the following options:

- **Full Status** - All profile data, both objective and subjective, indicate potential giftedness.

- **Monitored Status** - Potential giftedness is indicated; however, inconsistencies appear in subjective and/or objective profile data. If a candidate is assigned monitored status the selection committee has two additional options:

  Need more data - The Committee directs the gifted consultants to expand upon the profile data. The Committee's decision is delayed until the profile is expanded.

  Place and Observe - The student candidate is placed in the program and receives full services while performance is observed within a gifted environment. The Committee reviews the student's status after a stated period of time.

- **Talent Pool** - In the holistic process a student who reaches candidate status has some measure of potential; therefore, in recognizing that potential the selection committee may determine that the district's enrichment program for able learners at the elementary level and enrichment/elective or honors classes at the secondary level is the most appropriate placement. Talent pool students are not precluded from later entry into the gifted program.

The candidate's parents are informed by the gifted consulting teacher of the selection committee's decision. If a candidate is recommended for program participation, the consultant seeks parent permission. Parents of all post-selection student candidates are invited by the consultant for an individual conference to review the profile, discuss program status recommendations, and to gain information about the district's gifted and enrichment programs. Parent conferences are also seen as an opportunity to give parents at-home ideas and to encourage them to become involved in gifted/enrichment education as a volunteer and as a program advocate. (See Figure 2.)

Implications

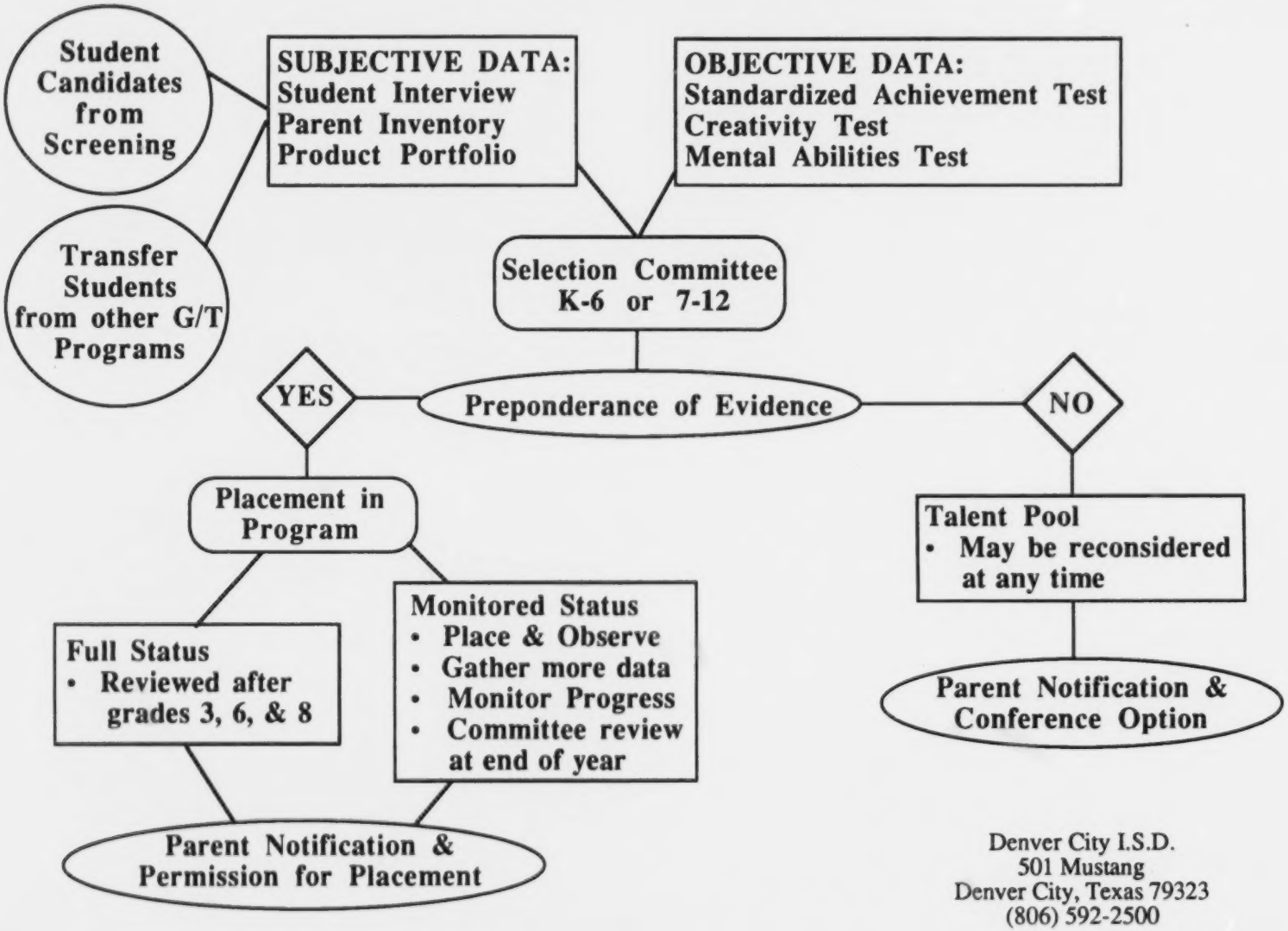
It is when qualitative and quantitative methods systematically converge in a holistic process that programs can be developed around the needs of students, rather than student identification being premised upon a program agenda. The holistic approach enables the structure of an inclusive process to find and bring children into an inviting array of possibilities. The holistic process uncovers potential and provides program access to gifted youth from rurally isolated, experientially or economically disadvantaged backgrounds, homes with a primary language other than English, or other traditionally neglected populations.

The holistic approach is an adaptive one. Small school districts may choose to have a single screening and a single selection committee to serve their kindergarten through high school populations.

Large districts could develop their own modification of the holistic process, possibly by clustering several campuses together to form representational membership in multiple screening and selection committees. Professionals and parents representing diverse campuses might share or rotate membership on cohort committees serving campus clusters. If campus cluster committees worked specifically to identify potentially gifted youth and toward the greater effort to serve all students of the district, the reliability, integrity, and consistency of the committees' decisions, as well as the program vision, could be maintained.

FIGURE 2

SELECTION PROCESS



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Conclusion

The most powerful attribute of the holistic approach is that it empowers professionals and parents within a thoughtful committee-based process. The holistic approach, in contrast to a matrix method, takes more time and includes more people. This method should be viewed, rather, as an investment in the genuine power of collaborative and reflective decision-making by professionals and parents working in concert to recognize and celebrate human potential.

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UPCOMING CONFERENCES

National/State Leadership Training Institute for Gifted and Talented
The C^3 Model in Action

April 24-26, 1991
Houston Marriot West Loop

Creative Workshop Associates
Excellence Without Elitism

April 30, 1991
Holiday Inn Airport
San Antonio, Texas
&
May 1, 1991
Holiday Inn DFW
Dallas/Fort Worth Airport

Texas Association for the Gifted and Talented
14th Annual Conference

November 20-23, 1991
Dallas/Fort Worth Hyatt & Twin Towers

Texas Education Agency
Division of Gifted/Talented Education

February 16-18, 1992
Hyatt Regency Austin

Using Product Portfolios for Student Assessment for Gifted Programs

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As Texas enters into mandatory kindergarten-12 gifted education, districts throughout the state will be initiating identification processes or evaluating existing processes in efforts to successfully identify ***all*** segments of their gifted populations. Districts that have gained experience in student identification during the developmental years of the Texas program for gifted students can serve as resources for novice districts as they search for nonbiased measures to assure that all gifted populations in their districts are fairly represented. This article provides information about Lubbock Independent School District's development and utilization of student portfolios as a nonbiased criteria for gifted identification. Information is provided relating to the stages of Lubbock's portfolio development, the district's portfolio curriculum for kindergarten, and the mechanics involved in implementing its use as a product and performance identification tool.

The Texas State Plan/Guidelines for the Education of the Gifted and Talented (1990) states that a minimum of five criteria must be reviewed for each nominated student. These criteria ***must*** include both objective and subjective assessments with consideration given to assure that the following specific groups have not been overlooked:

1) racial, ethnic, or minority group students,
2) culturally different,
3) handicapped students,
4) economically disadvantaged,
5) students who do not take advantage of options because of gender stereotyping,
6) students who display various types of classroom behavior such as disruptiveness, extreme shyness, excessively high energy levels, continuous questioning, intense anxiety, and short attention spans.

(Texas Education Agency, 1990)

This guideline is designed to assure that ***hidden*** gifted students are provided with opportunities to demonstrate gifts and talents that might not be readily observed in classroom participation or evidenced in traditional/standardized testing.

For the past five years, Lubbock Independent School District has explored the use of student portfolios in conjunction with a product and performance identification measure to help uncover this hidden population. Lubbock became involved in the use of portfolios as a result of its participation as one of the Institutes for Teachers of Young Disadvantaged Gifted Students. With the help of federal funding the Texas Education Agency sponsored these institutes for three years to develop new nontraditional measures to better identify disadvantaged gifted students and to train classroom teachers in their identification and appropriate differentiated teaching methods.

Dr. Sandra Kaplan of the National/State Leadership Training Institute on the Gifted and the Talented (N/S-LTI-G/T) served as the project's consultant and trainer for the staffs of these institutes. Dr. Kaplan assigned the staffs of the institute sites the task of selecting and adapting a nontraditional identification measure to better identify their disadvantaged gifted population. Lubbock selected Kaplan's recommended ***academic portfolio*** as their site's institute project. For two summers, a portfolio model was used with the potentially gifted pre kindergarten through second grade students enrolled in the institute's three week practicum. This new identification tool, used in conjunction with a products and performance checklist, helped the district successfully identify students who previously had not met district guidelines.

The initial success experienced with portfolios in the institute setting prompted the district, in 1987, to pilot portfolios during the regular school year. Kindergarten was selected as the target grade level due to the limited entry information on these students and the fact that objective measures can easily be influenced by previous limited environmental exposures and insecurity in an unfamiliar setting.

A ***Me at My Best*** portfolio curriculum (Dougherty, 1987) was developed for use with all kindergarten students in the district's sixteen ***CIMA***[1] cluster schools. Each fall semester, the district's K-1st grade gifted resource teacher goes into kindergarten classrooms and uses the curriculum ***Me at My Best*** as she works with students and their teachers. They work to develop an understanding of individual ***specialties*** and the use of portfolios to share one's specialities with others. The portfolio curriculum is divided into three lessons that are supplemented with both classroom and home extension activities.

The first lesson emphasizes the discovery of classmates similarities and differences and recognizes that differences produce individual specialities. The second lesson focuses on helping students acknowledge their own personal specialities and how their ***Me at My Best*** examples may be collected in a portfolio. The final lesson emphasizes various product challenges that can assist students in demonstrating their very best skills. Lessons are tied to kindergarten essential elements and reinforced by classroom activities and letters such as the one on page 14.

These lessons and activities lead to student created portfolios showcasing their individual gifts and talents. The contents of these portfolios provide teachers with additional gifted nomination screening input, assuring careful consideration of all students.

A products and performance checklist instrument is then used in conjunction with the portfolios of nominated students. This form allows for the recording of examples of the presence of eight selected traits indicative of giftedness as found in portfolio entries and/or exhibited in classroom performance situations. Teachers bring these checklists and student portfolios to campus-level program placement meetings attended by the teacher, counselor, CIMA coordinator or resource teacher, and principal. The committee reviews the checklist and portfolio contents and then, as a group, makes decisions as to which of the eight gifted traits are ***strongly*** evidenced. For each trait the committee acknowledges, the student receives one point. The accumulated points are then recorded in a ratio of accumulated points to possible points (Example: **5/8** would indicate a student's strong exhibition of five of the possible eight traits on the products and performance checklist). This figure is recorded on the CIMA student identification profile along with information from other screening instruments. The product and performance district line on the profile is set on five out of eight traits. Students meeting or exceeding this ratio receive one of three required criteria qualifications needed for placement in the CIMA program.[2]

For the past three years, all grade levels other than kindergarten have been using the Products and Performance Checklist in isolation (without individual portfolios) as their nontraditional subjective identification measure. Teachers write in descriptions of observed traits and provide explanations and/or sample examples during placement meetings to assist the committee in reaching a final ratio decision. Although this method has been serviceable, there are two strong validity reasons for the inclusion of student portfolios with product and performance checklists. The first reason is that students have a personal feel for their successful endeavors. By providing them with an

[1] Lubbock's acronym for their gifted program--Creative Intruction for Maximum Achievement, also the Spanish word for "summit."

[2] Editors' Note: Many districts that use the portfolio as an assessment measure give it a holistic rating such as "Superior," "Average," Below Average" rather than giving a numerical score.

Dear Kindergarteners,

I will be back to see you in your classroom on _____. Remember your promise that you would share your portfolios with me on my next visit??? Well, my next visit is almost here.

I'm **really** looking forward to seeing the "specialties" you have been saving in your portfolios. I know you are doing a super job gathering your best work. Did you remember to bring some things from home????

Be sure to have some "specialties" in your portfolio to share with me when I come. Let's look at your portfolios together, and I will also share some portfolio activity ideas with you and your teacher.

I can't wait to see what you have done!!!!

Developed by Edie Dougherty
Lubbock Independent School District

STUDENT PRODUCTS AND PERFORMANCE EXAMPLES

Use the spaces below to jot down classroom situations that provide evidence of a student's possession of any of the following G/T characteristics. Information may be transferred at a later date to individual student's Products and Performance Checklist.

HIGH QUALITY WORK	**ADVANCED VOCABULARY**	**LEADERSHIP SKILLS**	**IN-DEPTH UNDERSTANDING**
ADVANCED WORK	**DETAILED PRESENTATION**	**CREATIVE RESPONSES**	**KEEN HUMOR**

Developed by Lubbock Independent School District

opportunity to submit what they consider to be their best work, the validity of representative data is increased. Students may well possess *hidden* talents they are aware of that are not readily evidenced in the classroom setting. Student opinions about their best work need to be considered by placement committees as they consider students for gifted placement. A second reason for portfolio inclusion is the fact that student portfolio entries can supply placement committees with concrete examples of student abilities, thereby providing additional support to the teacher's subjective product and performance data.

Dr. Susan Johnsen, Baylor University, is currently researching Lubbock's existing product and performance data to determine: 1) how it relates to the district's other four criteria measures and 2) how valid portfolios and product and performance data are in predicting future performance in the gifted program. Information relating to these findings will be published upon completion of the project.

Districts that choose to become involved with portfolios will quickly recognize, as Lubbock did, the bonus derived from a curriculum that assists students in recognizing and appreciating their own strengths as well as the strengths of their peers. The potential within portfolios to produce positive affective growth and accurate, unbiased gifted identification data is only limited by the manner in which portfolios are presented to prospective students, the amount of staff support, and the resulting degree of student commitment to share themselves at their best.

(Curricular units and other materials developed by Lubbock Independent School District and described in this article may be requested by contacting the Division of Gifted/Talented Education, Texas Education Agency, 1701 North Congress Avenue, Austin, Texas 78701-1494.)

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THE TEXAS STATE PLAN AND GUIDELINES FOR THE EDUCATION OF THE GIFTED/TALENTED

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Identification of Gifted/Talented Students
Questions and Answers

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I am philosophically opposed to labeling children for any special program and the gifted program in particular. Why is it necessary to formally identify these students?

In order to appropriately serve students whose needs are not being met in the regular classroom, it is necessary to develop a system for identifying them. There is no other way that we can assure that coordinated and comprehensive services are being provided to those who need them. However, there also is no question that the identification process, though undertaken with the best of intentions, will place a label on the child who is identified for services in the gifted program.

Barbara Clark (1988, 461) notes, "Labels create expectations. When using labels such as *gifted* or *honors*, we must be very clear to state the precise meaning of the terms, what it is and what it is not." It should be clearly stated that the program for gifted students is designed for those whose needs are not met in the regular classroom. It is not a reward for good behavior. It is not an assurance of future success, either in school or in life. It is, simply, a way of assuring that these students will receive an educational program that challenges them to meet their potential. To safeguard against concerns regarding the identifying of children for special programs, educators should be careful in using the terms except in reference to the special program placement.

You say that labels create expectations. What about those students who we are labeling "not gifted"?

No sensitive or knowledgeable educator would ever say a child was "not gifted." Identification for the gifted program, like that of other programs, is ongoing, which means no one is excluded from consideration for program participation. The needs that require students to be placed in the gifted program are exhibited by children at different times and ages. Students may enter the program at any grade level at which it is indicated that the student requires its services. By the same token, students whose needs require additional services in the early grades may in later grades be better served in the regular classroom.

Why is early identification of gifted students so important?

District definitions of gifted students that are compatible with the state definition of giftedness apply to students in the primary grades as well as those served in later grades. The district's philosophy should be that students arrive at school with the characteristics associated with giftedness and deserve educational programs that address their needs from kindergarten through grade twelve.

No child should have to wait for an appropriate education or an education commensurate to recognized abilities. If young children arrive at school exhibiting behaviors and characteristics that make the regular school program inadequate, educators should provide programs that meet these needs as soon

as possible. Some educators prefer not to identify students for programs for the gifted in the early elementary grades. They believe it is better to wait until the child's school performance clearly indicates that the child has advanced abilities. In these cases, identification for program services usually relies heavily on test scores. When this happens, it is achievement that is often identified rather than characteristics and behaviors associated with gifted individuals. Unfortunately, by postponing appropriate educational placement for the young gifted child, there can be a loss in the child's potential. White (1975, 103) estimated that no more than 10 percent of preschoolers were "as well educated and developed as they should be." This is particularly true for children in low socioeconomic families. Gallagher (1979, 35) has warned that many parents and educators have incorrectly assumed that the talents of gifted children are basically indestructible. To the contrary, he believes that a negative or passive environment "can be expected to reduce substantially or even eliminate the high talent and ability that might have been present originally" in the young child.

What measures can be used to identify the young child?

When identifying students for gifted programs, district personnel must include at least five separate measures that are both objective and subjective in nature. The following are some points to consider when selecting measures for student identification.

- It is true that not all objective measures are appropriate for use with the very young child, but there are objective measures that can be used effectively.

  Those that are available are often suggested for use with individuals rather than with groups of young children. Caution and common sense should be used when selecting objective measures.

- Subjective measures that districts might consider would include teacher and parent ratings. Examples should be provided to parents or other community members who are asked to assess their own or other children. Student portfolios or other student products can be used to assist in identifying young children.

If more information is needed regarding specific objective and subjective measures, districts are encouraged to contact their education service center consultants in gifted education or call the Division of Gifted/Talented at the Texas Education Agency.

I am uncomfortable using objective measures with children in kindergarten and first grade. Why can't I use only subjective measures?

Chapter 89, Subchapter C of the Texas Administrative Code states that both objective and subjective measures must be used to identify students for gifted programs. When using objective measures at the kindergarten and primary grades, most districts use only one such instrument. However, concern regarding the validity of many objective measures at the kindergarten level may be justified. More and more districts feel that the information they receive from alternative assessment measures such as student portfolios, observation inventories, planned activities, and teacher and parent nomination forms provides them with an accurate, holistic picture of the child's ability. If a district wishes to develop an identification procedure at the kindergarten and primary grade levels that relies solely on subjective criteria, they may request a waiver for the rule, following the procedures included in §61.31 of the Texas Administrative Code.

If students are identified in kindergarten, isn't there a greater chance of making a mistake?

Not really. It is important to remember that the purpose of identifying students as gifted

is to provide the most appropriate educational placement for them. If the students' needs at kindergarten indicate that something beyond the regular program is needed to help them maximize their potential, they should receive those services. Even if it is determined later that a student does not need the services of the program, it does not mean that a mistake was made in the earlier placement.

Educators know that some students take longer than others to adjust to a school setting. They also know that not all students progress at the same rate. There is no doubt that some students not included in the kindergarten program will show their abilities at a later age. That is the reason for ongoing identification. However, those students who clearly have the potential should be served when that potential is first observed.

Why do I have to identify kindergarten students by the end of the first semester? I don't think that is enough time.

There is no State Board requirement or legislative mandate that requires that kindergarten students be identified by the end of the first semester. Because identification of students at the kindergarten level should be primarily observational in nature, services designed to assist in the identification process must occur during the kindergarten year. However, data may be collected throughout the year, with identification of students taking place before the submission of Table V of the second semester *Principal's Semester Report of Student Attendance and Contact Hours.*

What is the purpose of using a committee to select students for the gifted program?

Chapter 89, Subchapter C of the Texas Administrative Code states that final selection of students shall be made by a committee of at least three local district educators who have received training in the area of gifted education. The committee reviews all subjective and objective data that have been compiled on each student nominated for the gifted program. A minimum of five criteria is required by the Texas Administrative Code, but ideally more information is reviewed. During the review process, the committee looks for student strengths and assesses the educational needs that are inferred from the diagnostic information. The committee is charged with the responsibility of determining which students have needs that are not likely to be met in the regular school program. Giftedness is multi-faceted; therefore, the committee must keep in mind the area of ability the gifted program will serve and identify the students who have strengths or potential in that area.

In cases where a district cut-off score is used on a matrix or profile, some decisions will be made easily, as students will clearly qualify by meeting the required cut-off or by having a specific cut-off score on three out of five measures. The committee should review data on students who do not meet these requirements and make a professional decision about the appropriate educational placement of those students.

Should parents be included as members of the selection committee?

While Chapter 89, Subchapter C of the Texas Administrative Code states that the committee shall be made up of at least three local district educators, there is nothing in rule or law that prohibits parents from serving on the committee. Some districts have had very good results using a parent representative on the committee as well. The parent who serves on the committee is able to assure the community that a fair assessment was made and the process was handled in a professional manner. If parents do serve on the committee, it is recommended that student names not be used. Data reviewed by the committee are confidential. If and when it becomes necessary to discuss students by name, the parent should be excused.

State Board rule requires that identification committee members receive training. What kind of training should be provided and how many hours should it be?

Chapter 89, Subchapter C of the Texas Administrative Code requires that training be provided to members of the identification committee. However, it does not require a set number of hours or mention specific topics. It is the responsibility of the district to determine committee needs. Certainly all educators should be informed about the needs and characteristics of gifted students, what their expected competencies are, and what type of program is planned to meet these needs.

Remember, too, that all staff really are part of the identification process because they may nominate students for program participation. Therefore, districts might want to offer some training to all staff members. It is especially important to train coordinators of special education and bilingual programs. These programs train educators to be excellent appraisers of students' abilities, but sometimes they forget that a child can be both gifted and bilingual or gifted and handicapped.

Can identification criteria vary from one grade level to another?

Yes, almost all districts use different criteria at different grade levels. As an example, districts that have a program for general intellectual ability in the elementary grades frequently change the program focus to specific subject matter aptitude at the secondary level. In the early grades, criteria may include a composite score on an achievement test. Later, specific areas of that test might be used--the mathematics component for a science or mathematics program or the reading comprehension section for a program emphasizing language arts. Some districts use grades at the secondary level and not at the elementary. Districts may use one set of criteria at the kindergarten/primary level, modify their criteria at the upper elementary grades, and further modify the measures at the secondary level.

Do I need to re-identify students already in the program when program identification criteria change?

No. In fact, according to Chapter 89, Subchapter C of the Texas Administrative Code, districts shall not re-identify students for the program. If students are doing well, there is no reason to include them in a re-screening and selection process. They have already been selected and their successful performance proves that they are in the program that best fits their educational needs. It is important, however, to re-screen those nominated students who have previously been considered for the program but were not included in it.

The rules require that data and procedures used in the identification committee should assist in assuring that the program for gifted students reflects the population of the district as a whole. What are some suggestions to assist in implementing this rule?

The first step in assuring that data and procedures permit equal access to the program for gifted students is to review how students are nominated for services. Test scores should not be the only criterion for nominations. Additional sources might be teacher, parent, or peer nomination. In some cases, districts permit students to nominate themselves for further consideration. As noted in *The Texas State Plan and Guidelines for the Education of the Gifted/Talented,* all kindergarten students should be considered nominated for the

program and viewed as potential candidates for program services.

The next step would be a review of the instruments used as part of the identification process. Instruments should be appropriate for the student population. Districts should keep in mind that, although the same information should be collected on all students, it is not necessary to use the same instrument to collect that information. In many cases, switching from one type of aptitude test to another, or permitting students to take a test in their home language, may make a considerable difference in student performance.

It also is suggested that districts investigate using non-traditional assessment measures such as student portfolios, observation inventories, and planned activities as part of their assessment process. While these measures require more time, often they help educators get a fairer assessment of how a child learns and processes information than the data that are derived from an objective test. Emphasis should be on a child's potential and ability for learning, rather than on a child's knowledge base, which may be influenced by environmental advantages. Districts also should assure that students with handicapping conditions are provided the opportunity to take required tests or participate in observational assessments that enable the student to show his or her maximum potential.

After reviewing the instruments used, the process itself should be examined. In most cases, using a committee that reviews case studies or profiles of students on a wide array of activities and instruments will increase participation from underrepresented populations. The committee should include an advocate for special populations. This person, who may be a non-voting member of the committee, can provide information that is helpful as part of the review process. As an example, committee members may need more information regarding test taking performances of students making the transition from bilingual programs or of students with learning disabilities. The advocate can provide that information, thereby assuring that assessment information is more accurately reviewed.

Most importantly, district personnel must understand that the characteristics of gifted students are the same, regardless of cultural or socio-economic groups. However, how those characteristics are manifested varies in different populations, and educators who recommend students for program services must be sensitive to this fact. Training on how the populations in their specific community might reveal their potential is an important step in modifying expectations regarding the performance of disadvantaged youth.

What should I include in an appeals procedure?

Although State Board rule requires that an appeals process must be included as a part of the identification procedure, the district has the latitude of developing a policy that best meets its needs. In many cases, districts will review appeal policies that are used in other programs and will use these as a model for the one included for the program for gifted students. The following recommendations might be considered for inclusion in an appeals process.

Information on the identification process should explain how to initiate the appeals process. Generally, the program coordinator or building principal receives the appeal from parents or teachers. In most cases, the concern is sent to a committee that reviews the child's assessment information and makes a determination as to whether or not the child should be placed in the program. Some districts require that the person issuing the appeal must have additional data for the committee to review. In larger districts, the committees usually are campus level committees, although many districts prefer to use a district wide committee to assure that there is uniformity in decisions.

What is required in the district transfer policy?

Chapter 89, Subchapter C of the Texas Administrative Code states that school districts shall develop written policies on student identification that are approved by the local board of trustees and include a transfer policy. The provisions in the transfer policy are left up to the local district. There are several things to remember when adopting a transfer policy. The Texas Education Code, §21.652 states that a program shall be established for identified gifted and talented students in each grade level. When an identified gifted student transfers to a new district, the student's educational needs should be addressed as soon as possible. The student should not have to wait for an appropriate education. Certainly a district will want to consider the area of ability for which the student was identified in the sending district. If it is the same, the district may wish to automatically place the student in the program. Some do this on a probationary term to determine if the program and student are a good match. Other districts will take it as an automatic nomination, but require the application of local district criteria before making a decision. If the area of ability is different, the district may wish to collect data required by the local district criteria and have the information go to the selection committee to make a decision. Regardless of the transfer policy adopted, the caution is to do it as expediently as possible.

What must be taken into consideration when adopting an exit policy?

Even though an exit policy is required by Chapter 89, Subchapter C of the Texas Administrative Code there is nothing in rule or law that dictates the criteria for the policy. It should be remembered that multiple criteria have been used to identify students for the gifted program. Principle 3.6 in *The Texas State Plan and Guidelines for the Education of the Gifted/Talented* states that just as no single criterion such as an IQ score, teacher nomination, or grades can be the determining factor for selection, neither can it be for exiting.

It should be stressed once again that the purpose of the program for gifted students is to meet an educational need. If and when that need no longer exists, several factors will be indicative of the need for exiting. In the past many districts have used grade point average as a sole criterion for exiting students from the gifted program. This is not recommended as it makes the program for gifted students appear to be a prize to be earned rather than a program to meet an educational need. Case studies are available to indicate that some gifted individuals received poor grades all through school. Even though the grades may be poor, the gifted program may still be the best educational placement for the student.

The only valid reason for a school district exiting a student from the program is the determination of professionals, students, or parents that the individual is not placed appropriately in the program for the gifted. This determination is not based on one or two episodes in a class, but over a period of time in which assistance has been provided continuously to the child and the parents have been notified and are aware of the situation. It will be important for district personnel to determine the psychological, social, or academic reasons why the student is not successful in the program. If no extenuating factors are responsible for the student's inability to complete or master the skills taught in the class, then, after at least one parent conference, the child should be exited from the program and placed in one that more appropriately matches the student's cognitive ability.

Must I identify 5 percent of the students in the district? Can I identify more than 5 percent of the students in the district?

There is no quota on the number of students who can or should be accepted to the district's program. State funding is available for up to 5 percent of a district's average daily

attendance. However, a district is not required to identify 5 percent of its population. If more students are found than the 5 percent funding cap set by the Texas Legislature, the district has the obligation to serve these students in the appropriate educational setting. There should not be a waiting list of students who qualify but are not served in the program, and a program for the gifted should never be considered "full."

At the same time, it should be remembered that the gifted program is designed to meet the needs of students who require services not already provided in the regular school program. If a district discovers that, as an example, 20 percent or more of the students are being identified for services, it may be that the regular curriculum should be reviewed and enriched so that it meets the needs of more students.

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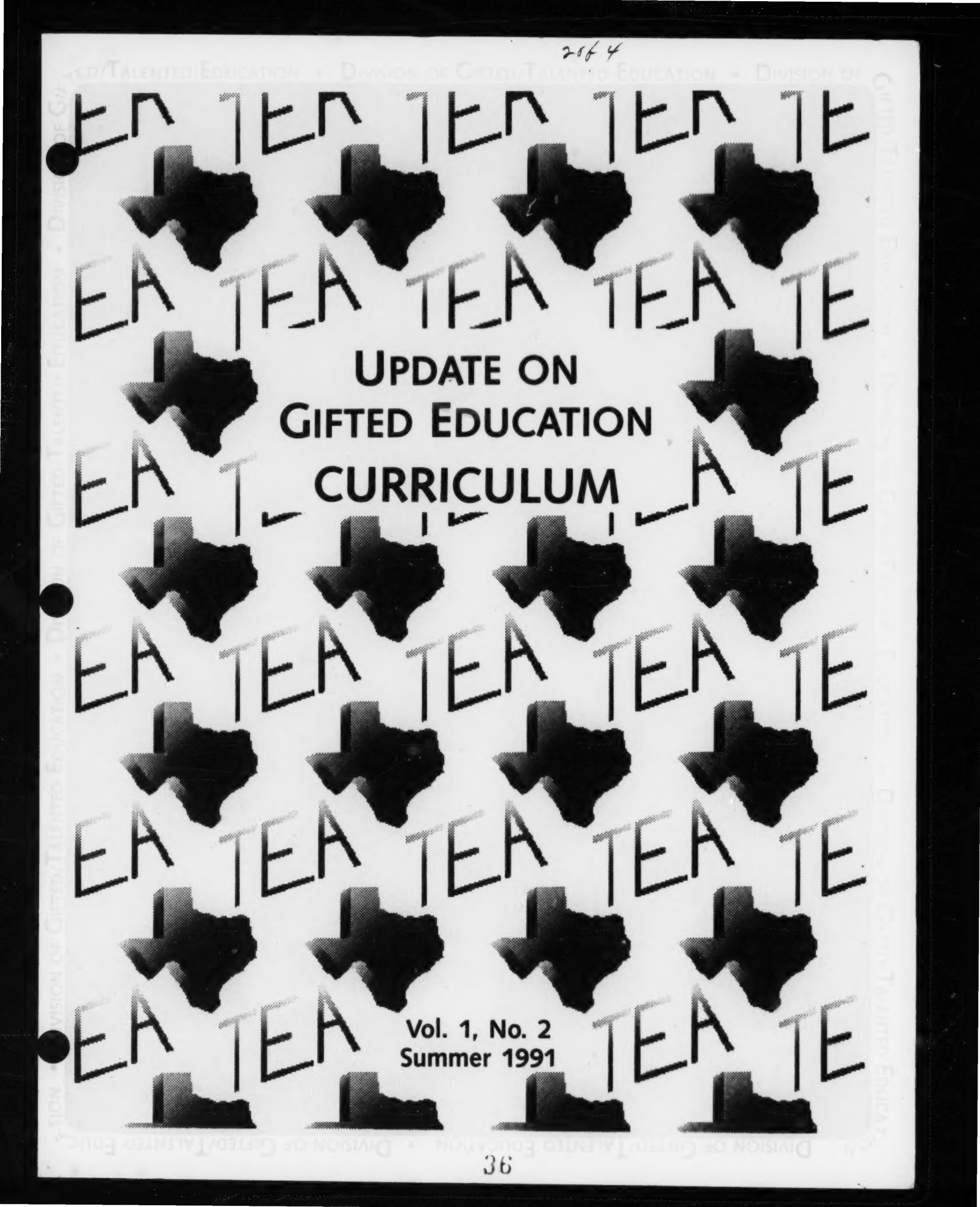

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FOREWORD

In his book, *Planning and Implementing Programs for the Gifted,* James Borland (1989) notes, "Unless we make some change in the educational programs of identified gifted students, there is no logical justification for bothering with any aspect of a program for the gifted." Too often, however, our focus is on the assessment of students for gifted programs, rather than on designing a curriculum that meets their unique learning needs. However, the Texas state definition includes the sentence, "These students require educational experiences beyond those normally provided by the regular school program." This sentence emphasizes the need to redress the mismatch between the learner and the program. This is done by developing a qualitatively differentiated curriculum.

Note that the emphasis is on "quality," not "quantity." Sometimes, educators ask gifted youth to do 20 problems instead of 10, or a 25 page paper rather than one of 15 pages. The articles in this issue of *Update in Gifted Education* offer guidance in how a district may develop a curriculum that is qualitatively enhanced by focusing on the characteristics that differentiate the gifted learner from others in the school population. The curricular differences do not make the gifted program "better" than other programs--it makes them more appropriate for some of the students in our school districts. The curriculum is not just "different" either. It is not composed of add-on enrichment activities that are appropriate and interesting for all children. The curriculum for a gifted program systematically addresses the cognitive and affective needs of identified students. If it does not, we have, as Borland implies, both wasted our time by identifying these students and failed in our charge to educate them to maximum capacity.

Although every district's curriculum for gifted youth will be slightly different, all should build on the regular school program. All should require mastery of the basic skills required of all students. All should recognize and respect the individual and cultural differences of our students. All should provide an appropriate level of challenge so that gifted students are not bored, underachieving, or required to do less than their best work.

This issue of *Update* provides a general background into curriculum development for gifted programs and sets the stage for later issues that will focus on other areas related to this aspect of program development. If you have a particular topic that you would like to see covered in future issues, please do not hesitate to contact the Division of Gifted/Talented Education at 512-463-9455.

Sincerely,

Jay Cummings
Deputy Commissioner for
Special Programs

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Introduction

Last quarter, *Update in Gifted Education* focused on the identification of gifted students. Because this was the first year of the mandate, many districts concentrated their efforts on the development of identification procedures that were both sound and appropriate for their total student population. However, emphasis must shift from *who* will be included to *what* will be taught. This issue, therefore, concentrates on the development of curriculum that will address the needs of the identified gifted students.

The first article, by Jim Coffey of Region XV Education Service Center, offers a philosophical foundation for why a differentiated curriculum is needed for gifted students. It provides a step-by-step process by which curriculum can be developed. It introduces certain concepts--the importance of a thematic approach, for example--that are re-emphasized in the articles that follow.

Michele Riojas, who teaches in Judson Independent School District, explains the importance of developing multidisciplinary units for gifted programs. Like Mr. Coffey, she offers a research-based foundation for the development of such units and includes several sources that can be tapped for further information.

While the first two articles present an overview on curriculum development, the third article, by Dr. Judith Martin from Region XX Education Service Center, focuses on the development of student objectives that are appropriately differentiated for gifted students. Numerous examples are presented and described so that the reader has a clear idea of the elements that should be incorporated into the objective. Because the Texas State Board of Education rules relating to gifted education require that all school districts must develop a scope and sequence and student objectives for the program, this article is particularly helpful.

The fourth article is by Jeanette Covington and Evelyn Hiatt from the Division of Gifted/Talented Education and offers responses to some of the most frequently asked questions relating to curriculum development. Readers may wish to review this article first, as it provides definitions and examples of themes and generalizations, two concepts that are discussed in several of the articles.

Finally, while the articles provide both research and examples to support the development of appropriately modified curriculum for gifted learners, an interdisciplinary unit on environmental studies that is designed for a secondary school gifted program is included in this issue. It incorporates many of the ideas expressed in the articles and may be used as a guide by program planners in developing their own units. Based on reader response, future issues of the *Update* may include other curricular units.

It would be impossible to adequately cover the topic of curriculum development for gifted learners in one issue of a journal. Future issues will examine instructional strategies, the learning environment, multicultural approaches, grouping strategies, and program models. It also is important to remember that there are many different approaches to the development of curriculum. The articles included in this issue offer several options that can be used to comply with State Board rules and guidelines. As always, however, districts are encouraged to use those approaches that best meet their local needs. In all cases, however, as stressed in each of the articles, program planners should use the Principles of a Differentiated Curriculum, included on the following page, as their guide in curriculum development.

Should you have any questions regarding the articles included in this issue or if you would like further information on gifted education, please do not hesitate to contact the Division of Gifted/Talented Education at 512-463-9455.

Evelyn Levsky Hiatt and Jeanette Covington, Co-editors

PRINCIPLES OF A DIFFERENTIATED CURRICULUM FOR THE GIFTED/TALENTED

- PRESENT CONTENT THAT IS RELATED TO BROAD-BASED ISSUES, THEMES, OR PROBLEMS.
- INTEGRATE MULTIPLE DISCIPLINES INTO THE AREA OF STUDY.
- PRESENT COMPREHENSIVE, RELATED, AND MUTUALLY REINFORCING EXPERIENCES WITHIN AN AREA OF STUDY.
- ALLOW FOR THE IN-DEPTH LEARNING OF A SELF-SELECTED TOPIC WITHIN THE AREA OF STUDY.
- DEVELOP INDEPENDENT OR SELF-DIRECTED STUDY SKILLS.
- DEVELOP PRODUCTIVE, COMPLEX, ABSTRACT, AND/OR HIGHER LEVEL THINKING SKILLS.
- FOCUS ON OPEN-ENDED TASKS.
- DEVELOP RESEARCH SKILLS AND METHODS.
- INTEGRATE BASIC SKILLS AND HIGHER LEVEL THINKING SKILLS INTO THE CURRICULUM.
- ENCOURAGE THE DEVELOPMENT OF PRODUCTS THAT CHALLENGE EXISTING IDEAS AND PRODUCE "NEW" IDEAS.
- ENCOURAGE THE DEVELOPMENT OF PRODUCTS THAT USE NEW TECHNIQUES, MATERIALS, AND FORMS.
- ENCOURAGE THE DEVELOPMENT OF SELF-UNDERSTANDING, I.E., RECOGNIZING AND USING ONE'S ABILITIES, BECOMING SELF-DIRECTED, APPRECIATING LIKENESSES AND DIFFERENCES BETWEEN ONESELF AND OTHERS.
- EVALUATE STUDENT OUTCOMES BY USING APPROPRIATE AND SPECIFIC CRITERIA THROUGH SELF-APPRAISAL, CRITERION REFERENCED AND/OR STANDARDIZED INSTRUMENTS.

National/State Leadership Training Institute on the Gifted and the Talented, Developed by the Curriculum Council (James J. Gallagher, Sandra N. Kaplan, A. Harry Passow, Joseph S. Renzulli, Irving S. Sato, Dorothy Sisk, Janice Wickless).

Developing Curriculum for Gifted/Talented

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The purpose of this article is twofold. First, it establishes that specific curricular needs exist for gifted learners and second, it emphasizes that these needs must be addressed in a cohesive process that relates each component of gifted programs to one another. An overview of current literature supports the need for specialized curricula for gifted learners. A process detailing one model that can be used to establish a structurally sound program of curriculum development and program implementation is then described.

The research on gifted students stresses the need to develop curriculum that meets their unique learning needs. While experts in the field express this idea in different ways, the theme is often repeated. As examples, Kaplan (1986) states that curriculum for the gifted can be defined as a match between recognized needs, abilities, and interests of the gifted students with the purposes and expectations held for them by the educational establishment. Van Tassel-Baska (1988) extends this idea by identifying four basic assumptions that should support a school district's commitment to the development of gifted curricula. They are that:

- the regular school curriculum, as it is currently developed, is inappropriate for gifted learners,
- general curriculum should be modified by deletion of material as well as addition of material,
- curriculum development for the gifted is a process that involves adaptation of current curriculum and the infusion of appropriate gifted curricula, and
- curriculum for the gifted must be written and communicated throughout the district.

Before beginning to develop curriculum for gifted programs, however, a district must address certain nonnegotiable standards that are critical to the success of a program.

1. There must be a clearly articulated program from kindergarten to twelfth grade. The intent of this standard is to reduce the fragmentation that may occur when there is no central direction established for program growth.

2. The direction of the program is defined in the scope and sequence that addresses program content with regard to the skills being taught.

3. The program is sequential, with skills and content addressed at one year being prerequisite to activities presented the following year.

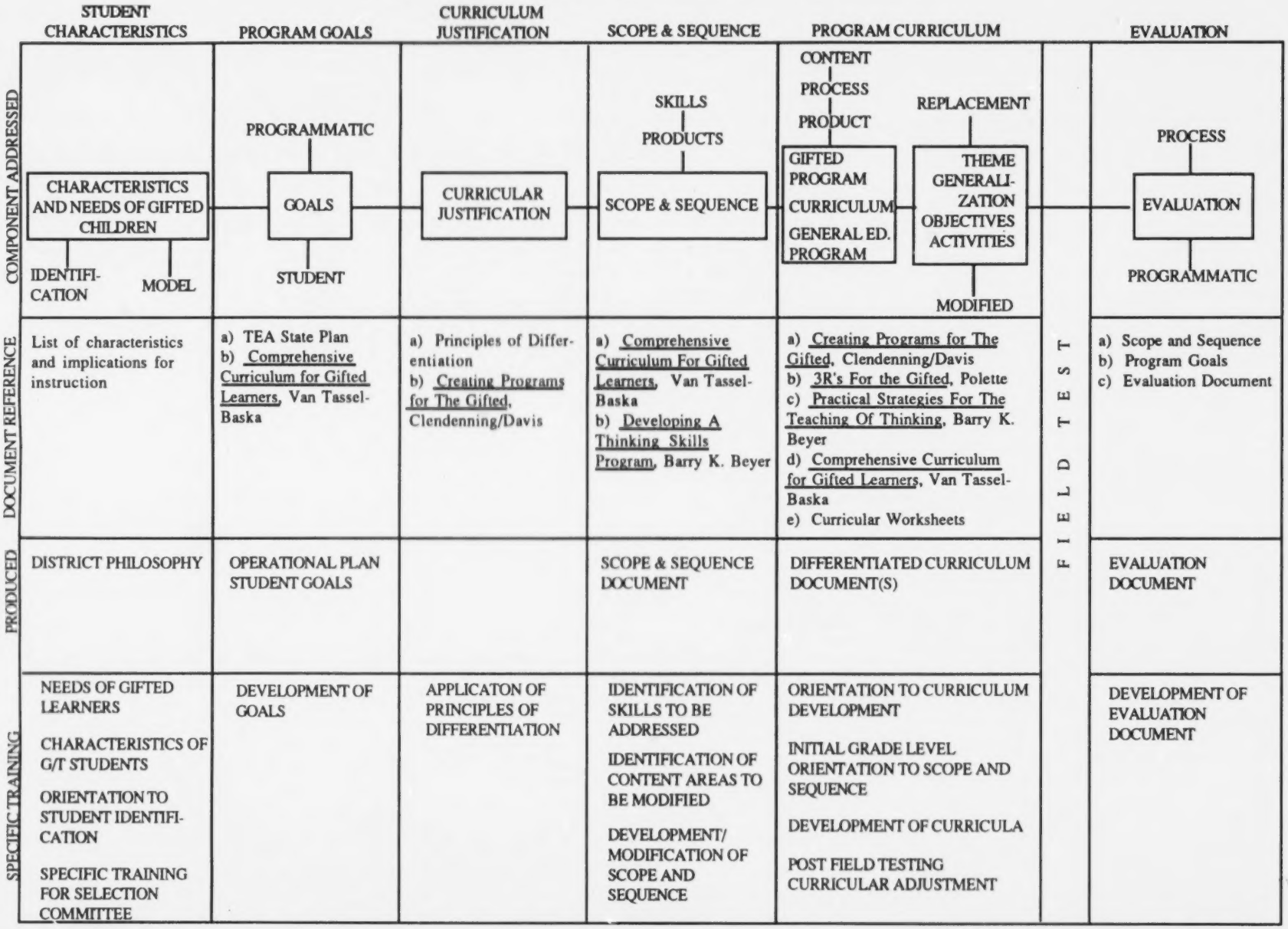
4. Certain check points are built into the program to allow for student assessment to determine continued placement.

5. There is commitment on the part of the district to the on-going development of appropriate curriculum for gifted students.

With an understanding of, and commitment to these managerial standards, school district program planners may then begin addressing a process to support curriculum development. Because it is often the case that districts are simultaneously developing both their programs and their curriculum, the task often seems overwhelming. It may be facilitated, however, by providing program planners with a systematic process that highlights critical aspects of program development while maintaining the perspective needed to view the total program.

Figure one depicts such a system. It combines a research base with sound educational practices that allows program planners to examine individual components within the perspective of the entire program. The first horizontal column addresses a particular program component. The second column indicates what materials might be used as reference sources. The third column indicates the document or

Figure 1
AN OVERVIEW OF COMPONENTS IN GIFTED PROGRAMS



documents produced, and the last column indicates the training needed by program planners and teachers.

The vertical columns focus on program components, with the first one emphasizing student characteristics. Every activity linked to education of any student should be based on the specific needs of the learner and the learning characteristics, or styles, of that learner. So it is with gifted education. Students who are gifted have characteristics that single them out from their peers. The curricular and instructional implications of these characteristics form the philosophical basis for the modification of teaching processes for gifted learners.

The second vertical column indicates the importance of programmatic and student goals for gifted programs. Programmatic goals deal with the basic elements of any instructional program and include, but are not limited to goals relating to identification, training, and program management. Student goals, which are broadly stated and limited in number, typically address advanced level content and products, as well as higher level thinking skills, research skills, and the application of such skills in instruction.

The importance of student goals must be stressed, primarily because they often are forgotten during curricular planning and instruction. These goals provide the initial direction for the program. In doing so, they provide one of the basic elements for both curriculum and instruction. Instructional objectives and activities must both relate to student goals. If they do not, either the goals or the objectives must be called into question. Training in goal development should include all administrators and teachers who have instructional or supervisory responsibilities for gifted programs. While this training will not require a great deal of time, it is one of the most critical on the training calendar.

The third vertical column emphasizes the justification that provides the basis for the differentiation of curriculum. This basis should establish what sorts of differentiation will take place and provides guidance for the changes in curriculum required for gifted programs. While several different lists of principles of differentiation exist, the one most commonly used in Texas schools was developed by the National/ State Leadership Training Institute for the Gifted and the Talented. The list of principles is included in *The Texas State Plan and Guidelines for the Education of the Gifted and Talented* (Appendix F) and on page xi of this issue.

These principles offer a very broad basis for curricular evaluation with regard to differentiation. The restatement of each principle in terms of a question provides a check of whether that principle is present in the curriculum. Familiarity with the principles becomes a nonnegotiable aspect of teacher training. Teachers should be familiar enough with the principles to relate them to appropriate curricular examples.

The combination of the Principles of Differentiation and the scope and sequence, emphasized in column four, become the framework and foundation of all curricula to be developed. All of the instruction that occurs in the classroom should relate to these two documents. The curricular scope and sequence states what should be taught and at what level. Therefore, the scope and sequence establishes a framework for the instructional program.

Depending on the kind of program established and the type of curriculum to be developed, the scope and sequence may be one of two types. The first is a skills-based document that *modifies* the skills in the general school curriculum. This document will generally address a variety of thinking, research, and application skills. In the case of curriculum that *replaces*, or is created in addition to the general curriculum, the scope and sequence document will emphasize both skills and content. In both cases, the document must relate to and support the student goals of the gifted program and should address the specific learning characteristics and needs of the gifted student. The scope and sequence document also establishes another link in the evaluation chain. Through these indicators of instructional direction, instructors and administrators are provided concrete examples of the skills and content that will be evaluated.

The development of a scope and sequence does not need to be a lengthy process. Materials exist in adequate numbers to define a variety of thinking skills, identify their component parts, and suggest when they might be introduced. Requiring teachers to do more than identify the skills to be addressed and receive training on

them requires the use of a commodity a district can ill afford to waste--time. Districts may review existing scope and sequence documents to see if they can be modified to meet local needs. This can save both time and money, enabling district personnel to focus on other program issues. However, it is extremely important that the document is modified to meet local needs so that it truly reflects what is taught and where it is taught in the district.

Some practitioners in the field of gifted education suggest that this approach deprives teachers of "ownership" in the curriculum. The concept of ownership in either the scope and sequence or the curriculum is difficult to attain. Ownership can be defined as a high degree of expertise with the content and skills to be taught. It will occur only after sufficient training, the development of the curriculum, and the field-testing of the curriculum has been accomplished. Curriculum is "owned" only after it is used.

To assure that the curriculum is used, training during this phase is critical. In the past, most teacher preparation programs have not included specific instruction in the selection and use of higher order thinking skills. In order for instructors to effectively provide direction for students, the teachers must be able to use these skills themselves prior to their developing curriculum around the skills. Many of the skills are complex, multilevel processes requiring teachers and students to go far beyond such basic skills as those listed in Bloom's taxonomy. Due to the complexity of the skills, teachers should have a working knowledge of how the skills are used, why they are used, and how to incorporate these skills into content areas. Training will be especially important if the program planners are adapting an existing scope and sequence rather than working with teachers to develop their own personal one. Trained teachers will begin to feel ownership in the curriculum as they become more comfortable with it.

Curriculum that grows out of the scope and sequence is the heart of any instructional program. The program elements that are essential for gifted learners are defined in the scope and sequence, but the actual modification of content, process, and product is defined in the curriculum document represented in the fifth vertical column of Figure 1. It provides the response to the student's perennial question, "Why am I here, in this place, at this time?" The student is in this place to learn a particular body of knowledge that is defined as curriculum. This body of knowledge, these elements, are essential for the student to function successfully in society.

The issue of what specific body of knowledge should be taught and how it is administered to gifted students becomes clouded when it is acknowledged that there is no specific body of content labeled "Gifted Only." It remains for program planners to modify existing curriculum by adding or deleting information and by matching this content to the particular type of program implemented. What the curriculum looks like will be determined in large part by the earlier decision made when developing the scope and sequence--does the program model implemented require curriculum that is *modified* or curriculum that serves as a *replacement* for the general education curriculum?

While there are numerous models that may be used when developing curriculum, the particular model selected is not as critical as the determination that a consistent approach be used throughout the district. However, in keeping with the Principles of Differentiation, certain elements should be present regardless of the type of model selected. As an example, curriculum should be developed around broad based themes. *Themes* are used to provide a unifying concept from which a learning unit is developed. This issue, concept, or problem becomes the central focus for student learning. The theme typically is viewed as a single word descriptor, but may be expressed as a phrase, sentence, or paragraph to describe the learning experience. Themes may be as abstract as Justice or as concrete as Pollution.

Themes are reenforced by *generalizations* that are broad statements of student learning. They may be stated in phrases or sentences and they establish managerial directions for the unit of study by stating clearly what the student will learn in the unit. These, in turn, lead to student objectives that establish, in behavioral terms, exactly what students will do as they interact with the content. The step by step directions for this interaction are described in student/teacher activities.

Perhaps the single most critical phase in the development of curriculum is the field-testing.

Field-testing may be viewed as the actual implementation of the curriculum in a limited access setting. Curricular changes may then be made based on direct feedback from students/teacher experiences rather than developer interaction. Interim field-testing may be accomplished while the curriculum continues to be developed in order to avoid a lengthy time gap between development and implementation.

The final column in the chart stresses the importance of evaluation. Evaluation is seen by many as the final step in the instructional process. In a much larger sense, evaluation is the bridge that carries developers deeper into program development. Many programs rely upon a mixture of student products and subjective evaluation from students, parents, and teachers to address program success. While student products may reflect the actual learning that has taken place, they frequently serve to close the instructional cycle rather than to provide an objective measure of skills attained. Evaluation of student learning must take a more objective turn in order to legitimize instruction in gifted programs and to determine if the student is learning new ways to process data. Based on the findings, curricular improvements are made in the program.

The process that has been described requires a great deal of planning and commitment on the part of district educators. At the same time, it assures that the curriculum developed for the gifted/talented program will both meet the needs of the students and the needs of teachers and administrators involved in its implementation.

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Multidisciplinary Programs at the Elementary Level

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A multidisciplinary curriculum is necessary for gifted students because it corresponds to and meets the needs of many characteristics these children display. Gifted students are quite able to "see the big picture," and learn best when they are presented with information on a global scale. Other characteristics that are reenforced by using a multidisciplinary approach include:

- the ability to make relationships between disparate pieces of information;
- the ability to move from concrete facts to abstract concepts; and
- the increased concern for "adult" issues and problems.

Giovanni Gozzer (1982) defines the term "discipline" as:

> A process in which learning finds expression [and] encompasses the division of knowledge into various branches...Disciplinarity appears to be a compartmentalization determined by the need to gain thorough knowledge of...each cognitive area.

Historically, however, educators have tended to separate disciplines into so many subject areas that students have lost a sense of wholeness. Subjects are studied in such isolation that students begin to believe that composition, history, and literature are mutually exclusive topics (Wolfe, 1984). This has resulted in part from the recent intensified focus on the basic skills, which causes many teachers to feel pressed for time to instruct in all areas (Melle & Wilson, 1984). Spaziano and Gibbons (1986) note that "A strict disciplinary approach propagates a narrowness of view that stands in marked contrast to current trends...." This "particle approach" must be corrected by achieving "holism or synergy at all levels" (Wolfe, 1984).

To achieve this holistic effect, teachers must plan to bring relationships among the various disciplines to the students' attention. The approach can be particularly successful in curricula written for gifted elementary students. The following assumptions should underlie any multidisciplinary unit written for gifted elementary students.

1. Gifted students should explore epistemological issues.
2. A model of curriculum and instruction for the gifted should include a dimension that focuses on the development of the thinking processes.
3. A special curriculum for the gifted should reflect a discipline-field and an interdisciplinary orientation.
4. The Interdisciplinary Concept Model should serve as a precursor to independent study.
5. Gifted students can, and in many cases should, be involved in the development of interdisciplinary units (Jacobs & Borland, 1986).

Jacobs and Borland (1986) recommend several steps when developing these units. The first is to select a topic. Hilary Dufner (personal communication, June 1989) recommends selecting broad themes, or topics with "common threads." Examples of a theme include "Patterns," "Conflict," and "Influences." These themes relate to many disciplines and provide the overarching concept for unit study. Step Two involves brainstorming associations. This is an interactive activity between the teacher and the students. In Step Three, guided questions for inquiry are formulated. These questions should be based upon the commonalities noted during the brainstorming that occurred in Step Two. The objective of Step Four is to design and implement activities. By following these steps, and adding culminating activities and evaluation, a teacher can develop a beneficial multidisciplinary unit (J. T. Murphy, personal communication, June 23, 1989).

While there are those who still will argue that the disciplines should remain separate entities, many researchers agree that "significant knowledge is interdisciplinary" (White, 1981).

Significant gains in student achievement will occur when students become aware of the relationships between subjects; consequently, motivation, understanding, problem solving, and thinking processes will increase (Reihs & Ramirez, 1987). By using a multidisciplinary approach, students will better comprehend the significance of an occurrence from one situation to the next, and understand the correlation between seemingly unrelated disciplines. Making mental connections is not only a possible, but a probable, outcome of a multidisciplinary unit (White, 1981).

Effective multidisciplinary instruction is action-centered, blending concepts "from all disciplines to solve realistic problems and challenges" (Melle & Wilson, 1984). It is student-centered (Dufner, 1989), and dependent upon an accepting point of view of the instructor (White, 1981). It prepares students for the future world they will face by "emphasizing inductive reasoning, interpretation, experimentation, risk-taking strategies, patterns and connections..." (Kistler, 1988). Aesthetic awareness, flexibility in thinking, and self-esteem will be developed as students make mental connections and realize their ideas and responses are of great worth (Fortson, 1977).

The research notes a great number of successful multidisciplinary and interdisciplinary curricula. They tend to be used primarily by teachers combining math with science or combining language arts with social studies (Murphy, 1989), but many effective units involving other subjects also exist.

A traditional example that weds social studies and language arts is the Alleman-Brooks and Fitzgerald (1977) unit on Consumerism. Both feel the skills of listening, speaking, reading, and writing can be particularly well developed while learning the skills taught in social studies. They chose "Consumer Education" as the unit's focus because it "is a process through which people of all ages helped to redefine the values they place upon their personal resources and their purchasing power" (Alleman-Brooks & Fitzgerald, 1977). The unit specifically investigates breakfast cereals and advertising, because of the students' interest in the topic.

Parker (1987) outlines an interdisciplinary curriculum for third graders, entitled Explore. The curriculum focuses on teaching students thinking skills and incorporates the disciplines of science and social studies in the following units:

- Common characteristics of living things
- Stages of development
- Similarities in occupations and avocations dealing with living things
- Common adaptations to different natural environments
- Common characteristics of different kinds of communities
- Similarities in occupations and avocations within and for communities

(Parker, 1987).

Research also provides many viable recommendations for both teachers and instructional leaders for implementing a multidisciplinary curriculum. Perhaps the most important factor is the commitment to the development of multidisciplinary units. One key will be the support of the campus principal. Riehs and Ramirez (1987), offer specific suggestions for principals who are interested in developing a multidisciplinary curriculum. The authors stress that principals can bring opportunities for interdisciplinary learning to the attention of the teachers. Additionally, they:

- play a role in individual course scheduling.
- set schoolwide priorities.
- encourage the use of in-service time for developing the interdisciplinary process.
- play a role in course sequencing.
- discourage the adoption of loosely sequenced, one-semester...electives to replace the traditional core curriculum in math and English.

The principal and the teachers who believe in the concept of multidisciplinarity and obtain the support of the faculty will find that the entire campus will benefit immensely. Ralph Ross (1981) notes that:

> Subjects are not wholes torn from the world to be studied in isolation. Nor are they experiences of a special kind with no relation to experiences of other kinds...As one increases the categories one uses in thought, one increases the size of the object of thought.

By applying multidisciplinarity to the classroom, student experiences become more realistic--and more *enjoyable*!

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Too often, disciplinarity and interdisciplinarity are viewed as an either/or proposition (Hayes-Jacobs, 1981). This, in our opinion, is an unfortunate and unnecessary dichotomy. Gifted students need to acquire the unique knowledge, skills, and language of the various disciplines as well as the vantage point and integrating dynamic of the interdisciplinary approach. It is this dual emphasis, along with the conscious focus on epistemological issues, that provides a means for differentiating content in a defensible manner. Just as pioneering artists like Joyce and Picasso could not break the rules until they had fully mastered them, one cannot derive full benefit from interdisciplinary studies until one acquires a solid grounding in the various disciplines that interdisciplinarity attempts to bridge.

Heidi H. Jacobs &
James H. Borland

Developing Student Objectives That Are Differentiated for Gifted/Talented Students

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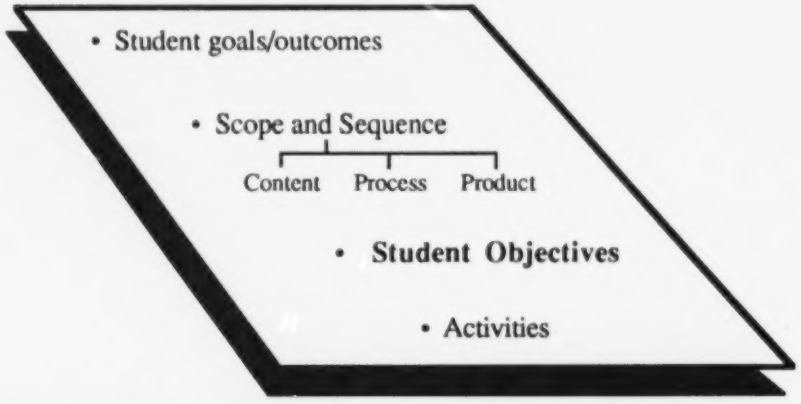
In Texas, a State Board of Education rule requires that districts "develop curriculum specifically designed for gifted and talented students that includes student objectives and a kindergarten through 12 scope and sequence" (1991). This article will focus on writing student objectives that are differentiated for gifted and talented students and that comply with the State Board rule.

In a school district's curriculum framework for gifted/talented education, the student objectives are based on the student goals/outcomes and the scope and sequence of the curriculum for the gifted program. The following diagram reflects this relationship:



Student objectives that are differentiated for gifted/talented students contain at least three elements--content, process, and product. The elements serve as the foundation for well-written objectives. The **content** elements should be broad-based, multidisciplinary, and stress generalizations and student interest. The **process** elements stress higher order thinking skills, research skills, affective skills, and an integration of basic skills. The **product** element emphasizes the development of new ideas and new techniques for communicating them (Kaplan, 1979). In the examples of student objectives in this article, these curricular elements are indicated by the notations shown below.

Content ☐

Process _____

Product ••••••••••••••

In their study of ☐frontiers,☐ the gifted/talented students in grade five, will develop a multi-media display that shows ☐the influence of a famous person (past or present) who demonstrated the "pioneer spirit."☐ The students will gather evidence from periodicals, original diaries, and other primary sources.

A closer look at the elements of **content + process + product** yields the breakdown shown in Figure 1:

Figure 1

CONTENT	+	PROCESS	+	PRODUCT
Theme		Higher Order Thinking Skills		Visual
Generalization		Creative Problem Solving Logical Critical		Oral
Topics		Research Skills		Written
		Basic Skills		Kinesthetic

Adapted from Kaplan, 1979, p. 43.

Student objectives that are differentiated for gifted/talented students contain these elements and delineations and should be drawn from the district's scope and sequence. The major parts and subparts of the following example of a student objective are shown in Figure 2.

Gifted/talented students in Government will establish criteria to judge the significance of natural or person-made power to change beliefs, life-style, and communication. Students will gather data by using a retrieval system, identify main ideas in fiction and nonfiction references, and develop a graphic representation to illustrate their findings.

(Adapted from Kaplan, 1986, p. 182.)

Figure 2

STUDENT OBJECTIVE DELINEATION

PROCESS +	CONTENT +	CONTENT +	PROCESS +	PRODUCT
Critical Thinking Skill ↓ Establish criteria to judge	Theme ↓ Power Generalization ↓ Power can be natural or person-made	Topic ↓ Significance of power to change beliefs, life-style and communication	Research Skill ↓ Use of retrieval system Basic Skill ↓ Identify main idea	Visual Product ↓ Graphic representation

Another example using a similar formula follows:

Gifted/talented students in grade five will compare and contrast the feudal system with present day social systems to demonstrate that all cultures create economic systems. Students will use books, periodicals, and videodiscs to collect information and share their findings in a chart.

A fourth aspect that can be added to student objectives relates to **affective** skills. This element includes the skills of self-understanding and evaluating outcomes. In the following examples, the affective element is designated by the dotted line:

In their study of cultures, the gifted/talented students in World History will investigate uses, abuses, preservation, and interdependence of natural resources around the world. After participating in a round table discussion to share their findings, the students will evaluate the dynamics of the group and consider ways in which the process could have been improved.

(Adapted from *The Texas State Plan and Guidelines for the Education of the Gifted/Talented,* 1990, p. 50.)

In their study that change requires adaptation, fourth grade gifted/talented students will brainstorm solutions for saving a particular flora or fauna on endangered lists. After establising critieria for judging the solutions, they will select the best one and offer suggestions for implementation to submit to an environmental group or government agency for consideration.

In summary, writing student objectives that are differentiated for gifted/talented students is based on the following steps:

1. Select a broad-based organizing element (theme, issue, problem).
2. Determine the range of content or knowledge to be learned and correlate it with generalizations.
3. Choose an array of processes or skills to be developed (higher order thinking skills, research skills, affective skills).
4. List a variety of possible products or outcomes.
5. Develop learning experiences and activities that are based on student interests and needs.

(Adapted from the work of Sandra Kaplan.)

The culmination of these five steps is shown in the examples listed below:

Gifted/talented students in grade two will demonstrate an understanding of how change can be positive or negative by showing in a poster or visual display how animals have or have not adapted to changes in their environment. (Adapted from *The Texas State Plan and Guidelines for the Education of the Gifted/Talented*, 1990, p. 49.)

In their study of adaptation, sixth grade gifted/talented students in Language Arts, will analyze the effects of natural disasters on characters in at least two novels, on people or animals in real life today, and on a culture of the past to prove that such catastrophes can have positive consequences. Students will use newspapers, interviews, and other appropriate sources and share their findings in a play or TV newscast.

In their study of conflict, gifted/talented students in Biology will formally debate the influence of scientific discoveries on medical practices and ethics after interviewing a professional in the field and gathering data from current journals. The students will summarize their position in a paper and judge their own and peer's debate performance on an evaluation form.

Gifted/talented students in Earth Science will investigate the concept of a tenth planet through an analysis of current research in scientific journals and share their findings in an oral presentation that will be judged by previously set criteria. (Adapted from *The Texas State Plan and Guidelines for the Education of the Gifted/ Talented*, 1990, p. 49.)

Student objectives provide the scaffolding for the activities teachers facilitate with gifted/talented students. The objectives are driven by the generalizations and serve as the main focus of instruction for these students. Clearly and concisely written objectives that are defensibly differentiated strengthen the curriculum and outcomes for these students.

References

Kaplan, S. N. (1979). *Inservice Training Manual: Activities for Developing Curriculum for the Gifted/Talented*. Ventura County, CA: Superintendent of Schools.

Kaplan, S. N. (1986). "The Grid: A Model to Construct Differentiated Curriculum for the Gifted." In J.S. Renzulli (Ed.), *Systems and Models for Developing Programs for the Gifted and Talented*, pp. 179-193. Mansfield Center, CT: Creative Learning Press.

Texas Education Agency. (1991). Texas Administrative Code, Subchapter C, Educational Programs for Gifted and Talented Students, §89.52 (a)(4). Austin.

Texas Education Agency. (1990). *The Texas State Plan and Guidelines for the Education of the Gifted/Talented*. Austin.

An Interdisciplinary Unit on Environmental Studies

This unit incorporates many of the ideas explained in the articles in this issue of *Update in Gifted Education*. The unit focuses on the theme of "Structures," and includes student objectives that lead to understanding of generalizations related to that theme. It is interdisciplinary in nature, and sample essential elements from science, language arts, mathematics, social studies, marketing education, and economics have been included to indicate how they are incorporated in the unit.

"Environmental Studies" was originally developed by Tom Weldon (Highland Park Independent School District) and B.K. Dean (Region XVIII Education Service Center) for students at the 1987 and 1988 Texas Governor's School. It was adapted for use in Texas public schools by Betty Strickland (Region VII Education Service Center).

Environmental Studies

Subject/Course:	Environmental Science
Theme:	Structures
Generalization:	The influence of one structure on another is not always immediately apparent.
Course Generalization:	Environmental balance is affected by the relationships of natural and person-made structures.
Root Discipline:	Science

Thinking Skill(s)	Research Skill(s)	Student Product(s)
Application Analysis Synthesis Evaluation Fluency	Formulate hypothesis, select procedure, gather and organize data, test hypothesis, formulate/ verify/communicate conclusion	Game, written hypothesis Comparative charts Terrarium Class wall chart Self-selected product Daily log

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Essential Elements

SS 75.68(k)(2)(C)(G)	Sci 75.64(m)(2)(B),(10)(A) (m)(9)(A),(9)(B) (m)(3)(B),(6),(7)(A),(8) (3)(A)	Math 75.63(i)(4)(A) (n)(6)(C) (f)(4)(C)

Objective 1:

In their study of structures, the students will prove or disprove environmental balance is affected by the relationships of living and nonliving structures. Using multiple and varied resources on ecological principles and theories, students will share their findings in a self-selected product.

Essential Elements:	Activities:
SS 75.68(k)(2)(C)	1. Brainstorm components of the environment necessary to support life.
Sci 75.64(m)(2B) (10A)(B)	2. Review appropriate literature to gain basic understanding of vocabulary and environmental concepts, principles, and theories concerning ecosystems.
	3. In order to determine "pitfalls" in trying to create the delicate balances needed to sustain a closed system terrarium, complete the following:
Math 75.63(i)(4)(A) Math 75.63(n)(6)(C) Sci 75.64(m)(9)	a. Develop a game to predict resulting effects on individual components of the environment when the factors are varied and play in groups. (If computers are available for student use, students may wish to adapt an appropriate program which utilizes variable factors or develop a game of their own. If computers are not available, students may wish to adapt commercial games or develop a game of their own.)
Math 75.63(f)(4)(C) Math 75.63(i)(4)(A) Sci 75.64(m)(9)(A)(B) SS 75.68(k)(2)(G)	b. Prepare comparative charts to show mathematical ratios of living/nonliving components necessary to maintain life in a closed system of a specified size and defend the ratios in class discussion.
Sci 75.64(m)(2),(A)(B), (3)(B),(6),(7)(A), (8),(9)(A),(9)(B)	4. Create a closed system terrarium in which the organisms remain healthy for at least four weeks and record results daily in a log (can use 2-liter soft drink container).
Sci 75.64(m)(3)(a) SS 75.68(k)(3)(A)	5. Distinguish relevant parallel relationships in environmentally-balanced closed systems, regardless of size, by comparing those of the terrarium to those of planet Earth. Communicate and defend these parallels in a self-selected format.
Sci 75.64(m)(3)(A)	6. As a class, categorize the parallels drawn, along with the supportive evidence, and create a wall chart for class reference to share findings on the generalization that "environmental balance is affected by the relationships of natural and person-made structures."

Materials/Resources:

Bright, George W., "Probability, Statistics, and Graphing". Part of EESA Title II project.
Christenson, John W., *Global Science: Energy, Resources, Environment.* (2nd ed.) Kendall Hunt Publishing Company, 1984.
Witte Museum - San Antonio Brackenridge Park.

Evaluation:

Student/teacher appraisal of products using student/teacher criteria generated at beginning of activities.

Subject/Course:	Environmental Science
Theme:	Structures
Generalization:	The influence of one structure on another is not always immediately apparent.
Course Generalization:	Environmental balance is affected by the relationships of natural and person-made structures.
Root Discipline:	Science

Thinking Skill(s)	Research Skill(s)	Student Product(s)
Application	Data gathering	Written reports
Analysis (compare/contrast)	Data organization	Panels
Synthesis	Interviewing	Debates
Evaluation		Bibliography
Originality		Transparencies
Forecasting		Charts
Predicting		Webs (mind maps)
		Self-selected product
		Class journal

Essential Elements

SS 75.68(k)(1)(B)	Eco 75.69(2)	Sci 75.64(m)(10)
(k)(2)(C)(D)(E)		(3)
(F)(G)	SS 75.68(j)(3)(A)	(6)
(k)(3)(A)(C)		(7)

Eng 75.61(a)(b)(c)(d)4
Journalism 75.61(aa)(4)(F)

Eng 75.61(a)(4)(N)

Objective 2:

Students will compare/contrast from past and present the management, economic, and social relationships in governing structures that deal with environmental issues. Use multiple and varied primary and secondary resources to gather data to create an organizational chart to communicate predicted future relationships in relevant governmental structures.

Essential Elements:	Activities:
Eng 75.61(a)(4)(N)	1. Generate a comprehensive annotated bibliography related to past and present environmental issues.
	2. Use the information in the bibliographic sources to construct a grid (transparency and/or chart) relating components of the environment to the time periods (beginning with 1800) when they came to public attention (ex: issues of land, water, air, noise, visual pollution). Discuss in class.
	3. Develop an annotated time line to trace the changes in the organizational scheme of government agencies that handle environmental issues at national, state, and local levels, beginning with 1800.
SS 75.68(k)(1)(B) (k)(3)(C)	4. Use the data concerning relationships of environmental problems with specific time periods and governmental agencies involved with those issues to construct a transparency overlay and/or comparative chart distinguishing the significant attitudinal changes that have occurred and discuss.
Sci 75.64(m)(10) SS 75.68(k)(2)(C)(D)(E)	5. Analyze, in groups, a chosen environmental issue through several decades and share with the class. Use the following (or alternate) steps:
Eng 75.61(a)(b)(c)(d)(4)	a. Read books, magazine articles, editorials, etc. representing various aspects of the selected environmental issues to gather sufficient background information to create a web (mind map) of the topic.
Eco 75.69(2) SS 75.68(j)(3)(A)	b. Utilize the mind map to generate appropriate questions on the selected issue that will distinguish accommodations made in governmental structures handling environmental issues to reflect the following:
SS 75.68(k)(3)(A)	1) management factors (who determines who does what; how much control do they have; how effectively can they enforce the control, etc.)
	2) social factors (protests, demonstrations, public opinion, media coverage)
	3) economic factors (lobbyists, special interest groups, etc.).
Eng (Jour) 75.61(aa)(4)(F)	c. Conduct interviews of persons who are/were directly involved with the selected environmental issue using the prepared questions (can be a telephone interview or interview letter).
SS 75.68(k)(3)(A)	d. Determine and outline the relevant aspects of a precedent-setting court case that exemplifies the complexities of the environmental issue.
	e. Distinguish relevant/irrelevant data relating to the issue using group-developed criteria.
SS 75.68(k)(2)(D)(E)	f. Prepare a presentation of relevant information concerning the issue and present through group-selected format to classmates.
SS 75.68(k)(2)(C)	6. Determine links among the issues presented by all groups and record the positive and/or negative aspects of those connections. Create a wall-size web (mind map) to communicate the interconnectedness of all environmental issues and governing structures that deal with them.
Sci 75.64(m)(6)	7. Gather data from the web and any other sources to debate in teams, from the perspectives of environmental associations such as Greenpeace or Sierra Club and a representative of energy related or logging industries, the following issues:

SS 75.68(k)(2)(C)(D)(E)(F)(G)
Sci 75.64(m)(6)(7)

a. Relevant data that forecast future environmental concerns.
b. Predicted changes that may occur in the relationships of governmental structures that deal with environmental concerns.
c. Future "necessities" involved in balancing the safety of the environment with the growing human population.

8. If appropriate, encourage students to submit their ideas to an environmental agency.

Materials/Resources:

Chiras, Daniel D. *Environmental Science: A Framework for Decision Making*, Addison-Wesley Publishing Company, 1989.

Carey, Helen H. & Judith E. Greenberg. *How to Use Primary Sources*. Franklin Watts, 1983, New York.

Christianson, Betsy Pogue. *Interview Research: Make an Appointment With Success*. D.O.K. Publishers, Inc., 1983, Buffalo, NY 14214.

Evaluation:

Student/teacher evaluation of products using student/teacher criteria generated at beginning of activities.

Subject/Course:	Environmental Science
Theme:	Structures
Generalization:	The influence of one structure on another is not always immediately apparent.
Course Generalization:	Environmental balance is affected by the relationships of natural and person-made structures.
Root Discipline:	Science

Thinking Skill(s)	Research Skill(s)	Student Product(s)
Application	Collecting and organizing data	Matrix
Analysis	Formulating/verifying/ communicating conclusions	Prepared questions
Synthesis		Field notebook
Evaluation		Written proposals
Fluency		Architectural rendering
		Environmental Impact Statement (EIS)
		Flowchart
		Time line

Essential Elements

SS 75.68(k)(1)(B)	Eng 75.61(a)(b)(c)(d)(1)	Sci 75.64(m)(1)(A)
(k)(2)(A-G)	75.61(a)(b)(c)(d)(2)	(1)(B)
(k)(3)(A)(C)	75.61(c)(4)(H)	(2)
(k)(4)(D)		(5)
	Eng (Jour) 75.61(aa)(4)(F)	(6)
		(8)
		(9)
		(10)

Objective 3:

In their study of structures, students will create plans for building a hypothetical city that take into account the environmental balance affected by the relationship of natural and person-made structures. After collecting and organizing information from data bases and other sources, students will share their plans with the local Sierra Club or Save the Earth Club.

Essential Elements:	Activities:
SS 75.68(k)(2)(C)	1. Brainstorm and discuss factors involved in developing a new city.
SS 75.68(k)(3)(A)	2. Use information collected to create a grid/matrix for comparing the impact of economic, social, and legislative elements on various environmental factors. Discuss how these interacting factors are likely to help shape the future (see materials: example of cross impact matrix in Futures Unlimited).
Sci 75.64(m)(10) Eng (Jour) 75.61(aa)(4)(F) SS 75.68(k)(1)(B)	3. Prepare appropriate interview questions concerning the development of a city for a panel of experts and pose them to the appropriate professionals. Summarize major points in class discussion.
Sci 75.64(m)(1)(a)(b)(5)	4. Gather and record observable data in a field notebook concerning soil conditions, water, meteorology, biological members (excluding humans), and topography at the teacher-selected site as identified on field lab task cards which will be compared to other student data for validation.
Sci 75.64(m)(10) SS 75.68(k)(3)(A)	5. Review, as a class, the National Environmental Policy Act (NEPA) of 1969. Obtain actual guidelines for preparing an Environmental Impact Statement (EIS), a federal requirement resulting from NEPA and discuss its use as a planning tool.
Eng 75.61(a)(b)(c)(d)(1)	6. Divide into city planning groups and formulate written proposals for developing the site. State how the following were identified and considered in arriving at the proposals:
Sci 75.64(m)(2)	a. Human, physical, and aesthetic needs.
SS 75.68(k)(2)(A-G) SS 75.68(k)(3)(C)	b. Fauna and flora needs. c. Principles and theories regarding land and natural resource uses.
	d. Local/state/ and/or national guidelines.
Sci 75.64(m)(2)(6)(9) SS 75.68(k)(2)(A-G) Eng 75.61(a-d)(2)	7. Prepare, as a group, an EIS for the project proposal as completely as possible, including the following: a. What the project is. b. Why it is needed. c. Short-term/long-term environmental impact of the project. d. Ways to minimize the impact. e. Alternatives to the project.
	8. Prepare architectural renderings of proposals for site (or a model, relief map, etc.).
	9. Prepare a flowchart to sequence the information for presentation to appropriate state agencies.
	10. Set up a suggested time line stating persons involved, responsibilities, dates for initiating each step, and dates of completion for project.
Eng 75.61(a-d)(2) Eng 75.61(c)(4)(H)	11. Present visual and written materials concerning proposals for hypothetical city development on selected site by groups during class time (can be shared with invited guests; is not competitive; is to show common/different factors in all proposals).
SS 75.68(k)(2)(C) SS 75.68(k)(4)(D)	12. Discuss in class the proposals of all groups and the results found in comparing variations within the methods used to deal with the environmental factors satisfactorily.

Materials/Resources:

Chiras, Daniel D. *Environmental Studies: A Framework for Decision Making*, Addison-Wesley Publishing Company, Menlo Park, CA 94025. 1984.

Fitch, Robert M. and Svengalis, Cordell M., *Futures Unlimited: Teaching About Worlds to Come*, National Council for the Social Studies, Bulletin 59, 1979, 2030 M Street, N.W., Washington, D.C. 20036.

Council on Environmental Quality Reprint 40 CFR Parts 1500-1508 (as of July 1, 1986), "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act."

Evaluation:

Student/teacher evaluation of products using student/teacher criteria generated at beginning of activities.

Subject/Course:	Environmental Science
Theme:	Structures
Generalization:	The influence of one structure on another is not always immediately apparent.
Course Generalization:	Environmental balance is affected by the relationships of natural and person-made structures.
Root Discipline:	Science

Thinking Skill(s)	Research Skill(s)	Student Product(s)
Application Analysis Synthesis Fluency Flexibility Originality Elaboration Judging with criteria	Collecting and organizing data Surveying	Informal poll Survey instrument Media campaign Flowchart Time line Environmental issue solution Oral presentations

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Essential Elements

Sci 75.64(m)(10)	SS 75.68(k)(2)(B)(C)(D)(E)	Mkt. & DE 75.86(d)2-7
	SS 75.68(k)(3)(C)(E)	
Eng 75.61(a)(b)(c)(d)(2)	SS 75.68(k)(4)(A-F)	
75.61(u)(3)(A-D)	SS 75.68(j)(3)	
75.61(u)(5)(A-F)		

Objective 4:

After selecting an environmental issue of local concern, students will use multiple and varied data gathering processes and creative problem solving to offer solutions and implementation strategies to show environmental balance can be maintained with person-made structures.

Essential Elements:	Activities:
Sci 75.64(m)(10) SS 75.68(k)(2)(D)(E)	1. Divide into groups and determine general and/or specific environmental problem areas within the local community by conducting an informal poll.
SS 75.68(k)(4)(F)	2. Utilize the expertise of a professional researcher in determining the techniques for conducting a legitimate survey and in preparing a valid survey instrument based on the results of the informal poll.
Sci 75.64(m)(10) SS 75.68(k)(3)(C)	3. Conduct the survey. Tabulate and rank order the results of the survey to determine a local environmental issue on which to focus as a class.
Sci 75.64(m)(10) SS 75.68(k)(2)(B)	4. Use a creative problem solving method to address and develop a "best" proposed solution for a selected environmental issue.
Mkt. & DE 75.86(d)(2-7) SS 75.68(j)(3) SS 75.68(k)(3)(E)	5. Invite advertising/public relations specialists to guide students in determining an appropriate positive media campaign for an "action plan" to implement the proposed solution with community support.
SS 75.68(k)(2)(C)	6. Decide on a plan and prepare necessary flowchart and time line; follow through.
Eng 75.61(a-d)(2)	7. Send a copy of the students' proposed solution of the selected environmental issue to appropriate city/state and/or national representatives of governing structures.
Eng 75.61(u)(3)(A-D) Eng 75.61(u)(5)(A-F) Eng 75.61(a-d)(2)	8. Present the proposed solution to as many civic clubs, PTAs, etc., as possible to gain community awareness and support.
Eng 75.61(a-d)(2) Eng 75.61(u)(5)(A-F)	9. Get on the agenda for a city council meeting and make a presentation.
SS 75.68(k)(4)(A-F)	10. Assess results to provide the basis for future improvements.

Materials/Resources:

Burges, Bill. *Facts & Figures: A Layman's Guide to Conducting Surveys.* Institute for Responsive Education, 1976. 704 Commonwealth Ave., Boston, MA 02215.

Juntune, Joyce. *Science Inquiry with REACH.* 1977. 120 Creative Corner, 4175 Lovell Rd., Box 18, Circle Pines, MN 55014.

Moller, Ruth B. & Sidney J. Parnes & Angelo M. Biondi. *Guide to Creative Action.* Charles Scribner's Sons, New York, 1977.

Roets, Lois Schelle. *Survey and Public Opinion Research.* Leadership Publishers, 407 West Cherry St., P. O. Box 51, New Sharton, IA 50207.

Evaluation:

Student/teacher evaluation of products using student/teacher criteria generated at the beginning of activities.

Courses Reflected by Essential Elements Listed Throughout the Unit

SCI 75.64(m)	Environmental Science
SS 75.68(j)	Sociology
SS 75.68(k)	Advanced Social Science Problems
MATH 75.63(f)	Algebra II
MATH 75.63(i)	Elementary Analysis
MATH 75.63(n)	Computer Mathematics II
ECON 75.69	Economics, with Emphasis on the Free Enterprise System and its Benefits
ENG 75.61(a-d)	English I, II, III, IV
ENG 75.61(aa)	Journalism
ENG 75.61(u)	Introduction to Speech Communication
MKT. & DE 75.86(C)	Advertising and Display Services

Curriculum Development: Questions and Answers

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How is the development of curriculum for gifted students different from curriculum that is developed for any other student?

Basically, it's not. Curriculum is developed to meet the needs of the learners. That means that it is necessary to assess the competencies and needs of the students and base the curriculum on the determined strengths and weaknesses. Gifted learners have certain characteristics that have implications for the type of learning experiences they receive in school. As an example, gifted students generally can move quickly from concrete facts to abstract concepts. Therefore, less time can be spent on acquiring basic content information and more time can be spent on analyzing, synthesizing, and evaluating data. The chart below, which contains characteristics listed by Clark (1988, p. 127) in *Growing Up Gifted,* offers further examples of how learner characteristics influence the kind of curriculum that is developed for gifted students. Notice that many of the curricular implications relate to time and treatment issues rather than content issues.

Most of the characteristics relating to gifted learners includes words such as "unusual" or "early ability." That's because the characteristics are present in all children and all children need exposure to the kind of curriculum that is developed for gifted students. However, with gifted students, the level of intensity and the timing of the experience is what differentiates the curricular experience.

Figure 1

Characteristic	Curricular Implications
Self directed learner	Opportunities to develop assignments and products independently or in small groups
Unusual intensity, persistent goal directed behavior	Flexible time allotments for development of studies; Early emphasis on research and study skills
Unusual sensitivity to the needs and feelings of others	Objectives that focus on the development of a value system that can be translated into social action
Early ability to delay closure	Need for open-ended assignments that enable student to draw hypotheses that require testing

So while I'm technically doing the same thing with the curriculum for the gifted program that I do for the general program, I still have to differentiate. What exactly is differentiated curriculum?

The concept of differentiated curriculum refers to the need to modify or alter the curriculum in order to make it responsive to the characteristics that differ learners from each other. In her works, Dr. Sandra Kaplan stresses that, in order to adequately differentiate the curriculum for the gifted, there are four major factors to consider:

- the general developmental nature of the learner,
- the specific characteristics that define the learner as gifted,
- the essential elements or basic curricular expectations for all learners, and
- the nature of the differentiated curricular expectations.

The chart on page xi, which is included in *The Texas State Plan and Guidelines for the Education of the Gifted/Talented* as Appendix F, reflects the principles that define a qualitatively differentiated curriculum.

These principles focus on the various curricular elements that differentiate the curriculum for the gifted. These include differentiating the:

- *content* or subject matter the learner will comprehend.
- *process skills* or competencies the learner will master.
- *product* or communication forms the learner will create or develop.
- *affective* needs or attitudes, values, and appreciations the learner will experience or develop.

These elements are important at every age and grade level, but are selectively emphasized and particularized to meet the needs of the specific population for whom the curriculum will be designed and implemented. In other words, the focus given to these elements at the time and place in the student's development ultimately determines the appropriateness of the differentiation for the learner. As an example, in the middle school grades, program planners might place more emphasis on affective elements of the curriculum than they would at the elementary level. Advanced content might be the focus at the later secondary grades, while research and study skills are stressed in the elementary grades. However, in the scope and sequence and student objectives, it should be clear that all four of the curricular elements will be addressed during the kindergarten through grade twelve continuum.

At times there are students in my class who are not identified as gifted but who express interest in the differentiated curriculum on which the gifted students are working. Must students be identified to participate?

There are two issues to consider in addressing this question. First, students absolutely do not have to be identified gifted to participate. Anytime a student is capable of participating in an activity he/she should be encouraged to do so. It is important to recognize that when the curriculum is appropriately modified for gifted students, it serves as a form of assessment for program placement. When a teacher notices that a student not identified for the program seems to be both interested and able to participate in program activities, it is a sign that the student should be considered for program placement.

Secondly, if there are large numbers of students not identified for the program who express interest and are able to participate, it may be that the curriculum needs to be evaluated. Perhaps it is not modified to the extent that it needs to be and/or that the regular curriculum should be strengthened. Some districts have found that as they progress in learning how to differentiate curriculum appropriately, the level of that differentiation also becomes more rigorous and sophisticated.

State Board rules require that my district have a curricular scope and sequence and student objectives for the gifted pro-

gram. What exactly is a scope and sequence and do I need to have it and the student objectives in separate curriculum guides?

The scope of a curriculum refers to what is going to be covered, while the sequence refers to the order in which the content, process, product, and affective continuum will be taught in kindergarten through grade 12. Depending on the services provided gifted learners, districts may or may not be developing separate guides.

Some districts have very extensive services that include separate classes from the primary grades through secondary school for gifted students. In these cases, separate curriculum guides may be developed. If the gifted program focuses on specific subject matter, the curricular information relating to the program may be an addendum to the curriculum guide on that subject or it may appear as an additional column within the regular curriculum guide. What is important is that all teachers who are responsible for the program for gifted students are aware of what the student objectives and scope and sequence are.

Before developing the scope and sequence and student objectives for the program, however, districts are encouraged to review the curriculum that is used in the general school program. It is critical to remember that the program for gifted students is built upon the curriculum in the regular classroom. The stronger this foundation is, the sounder the program for gifted students will be.

Does Texas have any essential elements for the gifted?

The essential elements that are included in Chapter 75 form the basis of instruction for all students, including the gifted. Because programs for gifted youth are developed in relation to local needs and curriculum, no specific essential elements for the gifted have been developed.

When developing my curriculum, should I emphasize enrichment or acceleration?

First, let's define the terms. Acceleration moves students vertically through the curriculum at a quicker pace. Examples of pure acceleration are early entrance into kindergarten or first grade, credit by examination, or entry into algebra in the eighth grade. Enrichment provides experiences that replace, supplement, or extend learning that is offered in the general curriculum. Examples of enrichment include seminar programs, independent study programs, and flexible scheduling (Kaplan, 1974, p.46).

In most cases, curriculum for gifted students is a combination of enrichment and acceleration. There are times and disciplines when one approach takes precedence over the other. As an example, students who are gifted in mathematics may be accelerated through the curriculum, taking algebra at an earlier grade or compacting two years of mathematics instruction into one year. While there are times when acceleration is appropriate, it should be remembered that it alone can not be considered appropriate modification of the curriculum for gifted learners. As an example, one teacher who teaches both an honors calculus class and a calculus class for gifted students believes that, not only are her gifted students younger, but they are able to move from theoretical concepts to practical applications of the material they are learning.

There's a lot of talk about thematic curriculum. What exactly does this mean and how would I go about developing such a curriculum?

A thematic curriculum is one that centers on a broad-based theme. Examples include curricula related to "Power" or "Change" or "Influences." While a thematic curriculum is appropriate for all students, it is critical for gifted students because it literally is limitless in its possibilities. A thematic curriculum can be endlessly expanded to include all disciplines. In this issue of *Update,* every article stresses that, in order to provide a handle on a thematic

curriculum, generalizations that relate to it should be developed.

Generalizations are statements that are true both over time and regardless of discipline. Learning experiences or objectives are developed that will enable the student to understand the theme and concepts implied in the generalization. As an example, if the theme of "Influences" was selected, the following generalizations could be the focus of learning experiences or objectives.

- Influences can be positive or negative.
- There are many factors that influence people, places, and things.
- Influences can form a chain reaction.
- An influence can be both a cause and effect.

There are several benefits from using a thematic approach when developing a districtwide differentiated curriculum for gifted students.

- It reflects the characteristics of the gifted. Because many gifted children have the ability to recognize relationships and to draw conclusions from these relationships, a curriculum that is based on themes is very appropriate for them. It assists them in drawing conclusions and transferring knowledge gained in one area to another. While this type of curriculum is particularly meaningful for the gifted, it enhances learning opportunities for all students for the same reasons indicated previously.

- It assists in the implementation of an interdisciplinary curriculum. The generalizations that are presented will be relevant to all disciplines and, therefore, the teacher can refer to examples across the disciplines. When emphasizing that "influences can be positive and negative," the kindergarten teacher might discuss how students' speaking manners influence others [Language Arts EE--75.22 (a)(2)(A)(iii)]. Students chart the influence taste has on whether or not they like certain foods [Science EE--75.25 (a)(1)(A)]. The class can hypothesize the negative influences of poor hygiene [Health EE--75.26 (a)(1)(A)]. This approach assists students in recognizing relationships between subject matter content and among disciplines. School districts that use a thematic approach either change the theme each year or at each grade level so that students work with many different themes during their school career. Over time, students not only grasp the relationships among disciplines and the relationships between topics within disciplines, but also the relationship among themes.

- A thematic curriculum relates individual facts to a "big" idea or generalization. It is a more economical way for students to gather and store information. Rather than referencing facts to a discipline, facts are referenced by themes to various disciplines. The student learns that all things are connected. For example, in the study of the theme of Origins, the student learns that books begin with words, plants begin as seeds, mammals begin as embryos, and proofs begin as hypotheses. If the student can grasp the idea of connectiveness, the teacher does not have to reteach facts separately in each discipline.

- A thematic approach does not change *what* is taught, it changes *when* and *how* it is taught. Teachers often are concerned that they will omit part of the basic or core curriculum if they formulate lessons by theme rather than by subject. The first grade teacher will still cover positive traits of self and others [Social Studies EE 75.29 (b)(1)(A)], awareness and sensitivity to natural and person-made environments [Fine Arts EE--75.28 (b)(1)(A)], and the effects of using alcohol, tobacco, and other drugs [Health EE--75.26 (b)(1)(D)] while discussing the generalization, "Personal actions influence what other people think of me." While the content is taught, the teacher can be working on critical thinking skills such as hypothesizing, comparing and contrasting, and making judgments. Research skills can be employed to assist students in gathering data to defend their opinions relative to the content. Products such as charts, time lines, and audio tapes will supplement instruction and offer new ways for young students to show what they have learned. Teachers who have mastered the ability to teach by themes note the changes in their own teaching style and in the learner outcomes of all students. Educators who feel the need to emphasize basic content and skills as the prerequisite to more advanced study can still teach thematically because this approach integrates the teaching of *both* the basics and the advanced content and skills that are important for students to master.

My curriculum has to reflect a kindergarten through grade 12 scope and sequence, but isn't the thematic approach too difficult for young children?

Think of the questions that young children ask. They frequently seem to be random and unrelated to each other, but often there is a connection that parents and teachers discover only after some questioning of their own. The thematic approach reinforces the connecting of concepts. The young gifted child is able to assimilate many bits of information and discover relationships among them. By providing a curriculum that helps them to understand that certain themes tie information together, educators are assisting these students to make new connections with greater ease. Consequently, they learn more and faster.

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UPCOMING CONFERENCES

Texas Association for the Gifted and Talented
14th Annual Conference

November 20-23, 1991
Dallas/Fort Worth Hyatt & Twin Towers

Texas Education Agency
Division of Gifted/Talented Education
Programs for Gifted/Talented Students

February 16-18, 1992
Hyatt Regency Austin

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Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

(1) acceptance policies on student transfers from other school districts;

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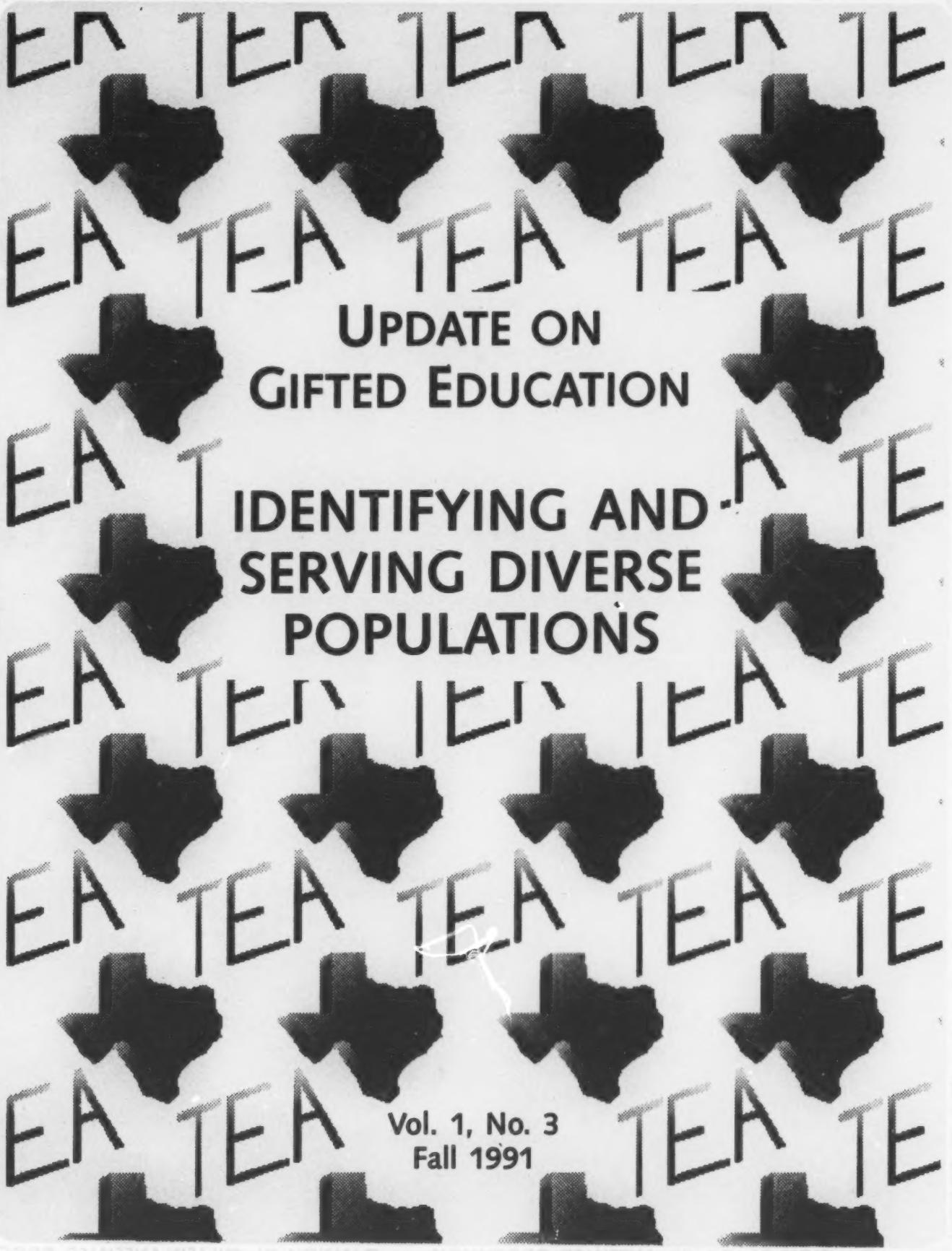

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update on gifted education

VOL. 1, NO. 3, FALL 1991

Identifying and Serving Diverse Populations

"All children can learn." This statement is accepted by most educators. However, do we believe that all groups of children have the potential to reach the highest levels of achievement? Are our educational practices compatible with the assumption that advanced talent in academic areas and cognitive ability may be found in children of all colors, cultures, and economic stratas? This notion is the very foundation of equal opportunity for programs that serve students with the highest potential in academic ability.

In Texas, we are fortunate to have laws and rules that allow for greater flexibility in identifying and serving students for gifted programs. Unfortunately, some districts are not using this flexibility to enrich their programs for gifted students. Many times, this is due, not to any overt action, but to practices and measures that do not enable all children to reveal their considerable and diverse talents. In this issue of *Update on Gifted Education,* educators from Texas and across the nation offer their insights into ways that we can improve our abilities to identify and serve gifted children in all our school populations. When the programs that address high academic ability reflect our total school population, we will know that we have finally reached the elusive goal of educational equity.

This publication was developed by Agency staff members in the Office of the Deputy Commissioner for Special Programs.

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Eliminating Four Barriers to the Identification of Gifted Minority Students

Mary Frasier
University of Georgia
Athens, Georgia

In February 1991, Dr. Mary Frasier, from the Torrance Center at the University of Georgia, presented the keynote session at the statewide conference sponsored by the Texas Education Agency on program planning for gifted students. Her presentation focused on four barriers that impact the identification of economically disadvantaged students. This article offers excerpts from that speech.

It is my pleasure to be back with you in Texas. Before I start, I would like to share with you the position that I take on this topic. There are about three things that are important and that were important to me in shaping these ideas.

First of all, I am not arguing against or for the traditional identification procedure. It has done well what it was intended to do, and that is to identify high IQ children. However, we know that there is something else that it can do, and that's the part we will focus on tonight. Traditional measures have not done as good a job in finding children who do not perform well on some of the components that are included on the test. It also gives false hope to some parents—and this is a national situation—who will engage in having their children tested until they reach the criteria that is required for identification.

The second thing that I don't believe in is a quota system. I think that quotas are short-term solutions to a much more complex problem. I believe that we can put our best talents to the task of finding bright children from disadvantaged backgrounds without putting in artificial methods.

The third thing is to acknowledge that we must use different criteria to find these children. But we also must consider those criteria as being as legitimate as the objective tests and viewed as equal to other measures.

Now to my topic, the four barriers to the identification of gifted minority students. These four barriers are:

- attitudes regarding the abilities of these children to achieve;
- access that is limited due to screening procedures used by districts;
- assessment that focuses on the IQ;
- adaptations to curriculum rather than accommodations.

In this presentation, I will share some of my recommendations regarding how we can get around those barriers.

Let us look at attitude. Attitude refers to a mental position with regard to a fact, or state, or feeling, or emotions toward a fact, or state. Despite the progress that we have made in identifying students for participation in programs for the gifted, we still have too many negative attitudes regarding giftedness in minority groups. There are several factors that have contributed to these attitudes. We say that one of the reasons we can't find these children is that they come from anti-intellectual environments, or unstable families, and homes and communities that provide poor or no role-models. We say they have low self-concepts, and have huge gaps or deficits in basic skills, with particular deficiencies in verbal skills that affect their performance on standardized tests.

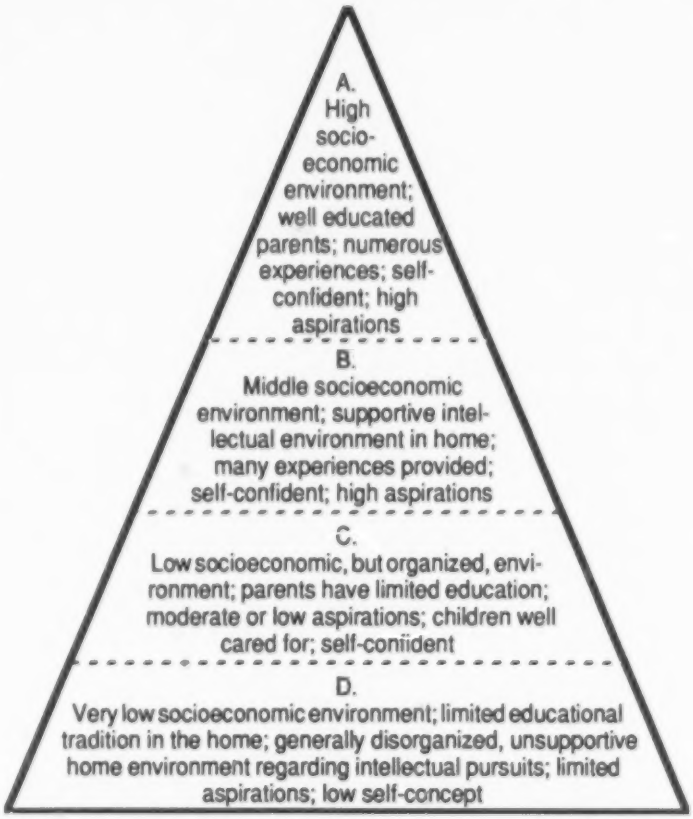
I prefer taking a proactive stance. In what ways can we eradicate these negative attitudes, these things that are barriers, that get in our way of really looking at the child, that get in the way of giving children an opportunity to say what they can do, and giving us the best opportunity to observe the potential that they have? There are four things that I would like to share with you.

- Not every impoverished home is necessarily illiterate.
- Limited opportunities to learning should not be assumed to permanently restrict the achievement of a child.
- We must focus on common mental traits of giftedness that reside in children, regardless of their background.
- We must understand and accept that giftedness may manifest itself differently in different children.

Let me comment on the first two, and share with you a couple of ways of getting at notions regarding impoverished homes and the alleged limited opportunities that those homes provide. Earlier, I developed a representation of the heterogeneity within minority populations. (Figure 1) I offer that to you as a way to look at the group instead of making generalizations regarding the group. That's what has gotten us into trouble. When people focus on what I call my family types, rather than generalizing and saying that, as an example, all black children are alike, we begin to see the children more clearly. We focus on the environment from which the children come, and thus can make better decisions regarding the adjustments that may need to be made if we are to recognize their ability. As you can see, the chart suggests that if we were to categorize them in

FIGURE 1

Black Family Types


A.
High socio-economic environment; well educated parents; numerous experiences; self-confident; high aspirations
B.
Middle socioeconomic environment; supportive intellectual environment in home; many experiences provided; self-confident; high aspirations
C.
Low socioeconomic, but organized, environment; parents have limited education; moderate or low aspirations; children well cared for; self-confident
D.
Very low socioeconomic environment; limited educational tradition in the home; generally disorganized, unsupportive home environment regarding intellectual pursuits; limited aspirations; low self-concept

Source: Copyright © Mary M. Frasier, University of Georgia, 1980.

some way—and these are not necessarily discrete units—that in any population group, we have persons who are at the highest economic level, down to persons who are at extremely dysfunctional levels. I would submit to you that the characteristics of the children who are in the very lowest group have too long been the way in which we have characterized all minority children. Recognizing the heterogeneity in groups is one way that we can begin to get a grip on this problem and begin to change our attitudes toward them.

Also, we will find that current research is moving away from focusing on the education and occupation of parents, and is examining the interactive environment to see the way in which these things affect students. What kind of language modeling occurs within the family? What kind of academic guidance do parents give their children, regardless of their circumstances? In what kind of activities do families engage? What is the intellectuality of the home; the work habits of the family? The more closely we examine these factors, the clearer our notion will be regarding the families of these children. When we do this, we cannot continue to hold some of the generalizations that we now make.

The third issue focuses on common mental traits of giftedness in children. James Gallagher and Paul Witty identified five generic traits that gifted children exhibit regardless of their economic state. If we were to focus on these five traits, focus on the children and their generation of these, I think we would help ourselves in terms of eliminating the attitudes that we've had. Those five things are as follows:

- The ability to meaningfully manipulate a symbol system regardless of the talent area that a person has. It may be verbal, it may be analytical, it may be musical, or it may be artistic. Whatever the symbol system of that particular area is, we should focus on how these children show their extraordinary abilities in manipulating that symbol system.

- The second ability is to think logically, given appropriate information or appropriate data.

- Third is the ability to use stored knowledge to solve problems. We know that one of the things about gifted children is their ability to not only amass information, but to bring that information forward to the solution of problems.

- Fourth is the ability to reason by analogy.

- And last is the ability to extend or extrapolate knowledge to new situations of unique application, or to take information and do something with it—the kinds of things that we refer to when we refer to creativity.

These five abilities are present in gifted children of all populations.

This leads us to another point. We must get clear in our minds what we mean when we talk about gifted and talented children. What are the constructs that underlie our assumptions? Figure 2 is from a publication put out by Good Apple and it makes a distinction between bright children and gifted children. We know that we need to focus on children who don't just know the answers, but the children who ask questions. Gifted children exhibit extraordinary abilities to ask questions. That is how we get breakthroughs. We know that we are talking about children who are able to achieve mastery rapidly. Our task is to look at that ability both within and outside of school activities. We know that these are not just children who absorb information; they are capable of manipulating information. They are not children who are just alert, they are children who are keenly observant about all the various things that happen.

The last thing to understand about attitude is that behaviors associated with giftedness may be manifested differently. The University of Georgia is part of a consortium of four universities that form the National Research Center on the Gifted and Talented. As part of that project, each of us is focusing on a particular area. I am focusing on investigating giftedness in economically disadvantaged populations. The groups that we are primarily focusing on in terms of economically disadvantaged children are African-Americans, Hispanics (with all of the differ-

FIGURE 2

BRIGHT CHILD	GIFTED LEARNER
Knows the answers.	Asks the questions.
Is interested.	Is highly curious.
Is attentive.	Is mentally and physically involved.
Has good ideas.	Has wild, silly ideas.
Works hard.	Plays around, yet tests well.
Answers the questions.	Discusses in detail, elaborates.
Top group.	Beyond the group.
Listens with interest.	Shows strong feelings and opinions.
Learns with ease.	Already knows.
6-8 repetitions for mastery.	1-2 repetitions for mastery.
Understands ideas.	Constructs abstractions.
Enjoys peers.	Prefers adults.
Grasps the meaning.	Draws inferences.
Completes assignments.	Initiates projects.
Is receptive.	Is intense.
Copies accurately.	Creates a new design.
Enjoys school.	Enjoys learning.
Absorbs information.	Manipulates information.
Technician.	Inventor.
Good memorizer.	Good guesser.
Enjoys straightforward, sequential presentation.	Thrives on complexity.
Is alert.	Is keenly observant.
Is pleased with own learning.	Is highly self-critical.

by Janice Szabos

Challenge, Copyright 1989, Good Apple, Inc.

ent variations), Native Americans (we've also included Native Hawaiians and Native Alaskans), Caucasians, Asians--all of the various groups according to their low socioeconomic status. One of the things that we are attempting to do in our research project is to look at giftedness, to look at children from disadvantaged backgrounds, and to try to identify what some overarching constructs are that underlie the concept of giftedness. We have come up with a number of things that we feel are important. We are looking for students, not in terms of the way we typically look for them which is how they are represented on checklists, but by asking people to explore the manifestations of these particular constructs across a number of different groups.

As examples, two checklist items include motivation and interest. We're trying to explore the various things that turn these children on. Who encourages them? Who do they feel they can go to for help? What are they interested in? What are they not interested in? Who in their world space provides them with the assistance they need? We're trying to look for the different ways in which this is manifested across a variety of groups. As an example, rather than just focusing on the verbal indicators, we're trying to look at the communication construct. As we look at communication, we are suggesting that we need to describe how these children communicate. We want to keep in mind that communication is a very broad concept that is both receptive and expressive, so we're trying to interpret that construct in its very broadest sense.

We're trying to look at the construct of memory. I think we have all accepted the fact that bright children are able to amass quite a bit of information. As we try to get at that across a variety of groups, we are asking things like, "Tell me about the child who knows more about something than anyone else that you know." All of us have been in situations in which we have said, "This child amazes me with what she knows." When we can acknowledge the various things that students know, and not concentrate on what we want them to know, we will find some who have extraordinary abilities.

We're trying to examine the problem-solving construct. We are looking at this both in terms of school and outside of school activities. We're looking for those children—and I'll bet any one of

you could think of children like this—who always have a Plan A, or B, or C. They have a way to solve problems. If one way doesn't work, they go to another. Those are the children who are demonstrating extraordinary ability and can give us some indications of their ability to make the breakthroughs that we have come to associate with giftedness in our society.

We are also looking at inquiry. We are trying to broaden this whole concept instead of just confining ourselves to what on a list typically says, "Gifted children ask a lot of questions." This keeps us from assessing children in certain population groups who don't ask questions, or who haven't been socialized to ask questions. What we are saying is, "Tell us about how these children inquire into their world, how they find out about things." We feel that getting some answers or some observations on these kinds of things will give us a better notion regarding the different ways in which children in different population groups inquire into their world.

I also would like to share a few ideas on the second barrier—that of access. When we talk about access, we are referring to permission, liberty, or the ability to enter, approach, communicate with, or pass to and from. In gifted programs, we know that access tends to refer to the way in which children are considered for placement in gifted programs. James Gallagher once said that if a child does not get a chance to come to bat, that child does not get a chance to hit. We have to look at some of our access methods. We know that the usual method is through some form of nomination by individuals or some form of screening with tests. It is highly recommended and we all read the literature that recommends to us that we should use broad-based screening procedures in order to gather data from a variety of sources. Not only paper sources, but people sources.

Let's look at some ways in which we can provide these children access by looking to sources of data other than teacher recommendations or checklists. Here are some suggestions from a report that looked at successful children from economically disadvantaged and minority groups. The first one was a sense of identity, or that strong sense of self, of pride, and of worth. I think this characteristic is particularly worthy of note, because it relates to the attention currently being paid to reinforcing the establishment of one's cultural identity or cultural heritage. In addition to that, another characteristic of these children is their freedom from conditioning, or exhibiting a kind of freedom from the routine brainwashing that's normally succumbed to by others. Another is their questioning orientation—their ability to ask questions such as: "Who am I? Where am I going? What is the meaning of life?" These children had an awareness of alternative paths that helped them develop their abilties and reach their goals. They were willing to endure the anxieties, suspense, disappointment and humiliation, of experimenting with new behaviors; and there was also a willingness to experiment with new ideas. Remember that Dr. Paul Torrance always reminded us that very bright people will always find themselves creating minorities of one.

The last characteristic of successful children from economically disadvantaged settings is the channeling of rage—the ability to channel rage that a lot of people feel because of the barriers that are placed against them as members of certain groups. These children channel that rage into very productive action. Some of the people that I have had the opportunity, and am having the opportunity to work with, represent for me very obviously that ability to channel that rage. This comes up in the work of Stuart Tonema, and the work that he's doing with Native Americans; Dr. Ernie Bernal, and his study of giftedness in Mexican American children; the work that Joyce Oatman is doing in the urban areas in Chicago; and of David Sing in Hawaii, where he is strategically planning ways to identify Native Hawaiian children.

Another thing that we can do to increase access is to focus on behaviors that indicate giftedness. I was very pleased to see in your *Texas State Plan and Guidelines for the Education of the Gifted/ Talented*, that a reference is made to the work of Elizabeth Hagen, who assessed behaviors that

indicate potential giftedness. She talks about things like students' use of language. If you think about that a moment, if you think about our great writers and the people that we call geniuses in that particular area, we never really count how many words they have in their vocabulary. We really get excited about the profound ideas that they are able to communicate through the written word. So one of the things that we can do is to observe how children use language. We can observe the quality of the questions, not just the quantity of the questions that they ask. We can observe their abilities to devise or adopt systematic strategies to solve problems and to change that strategy if it's not working. Lists like Elizabeth Hagen's remind us that giftedness is a dynamic, not a static, process, that it is constantly evolving, and that it is developmental. (Figure 3) It is not something that we can at one point in time determine. It is constantly evolving and we must be alert to it.

Now let's look at the next "A", and that one is assessment. Assessment refers to appraising, estimating, or evaluating the presence of something—and to what degree. In gifted education, we are looking at having the extraordinary possession of abilities, but not just in having ability. As we know, typically this task involves collecting test data on children. Studies clearly show the information typically used to place children in talented and gifted programs focus on three pieces of data—the intelligence test, the achievement test, and teacher nominations. In fact, many districts require that the IQ be at a certain predetermined level and this is the single common factor across what we do.

I think that we can do something about that. We can give more than lip service to the recommendation that Harry Passow has suggested and that we have probably all made. That is to use a variety of sources to adequately identify gifted behaviors. Passow noted that we need to employ a much broader, more varied procedure for identifying gifted and talented children, particularly those from disadvantaged populations . If you think about it for just a moment, you realize this benefits even children who are not from those populations. We then have maximum

FIGURE 3

Characteristics Related to Potential Giftedness

1. Student's use of language.
2. Quality of student's questions.
3. Quality of examples, illustrations, or elaborations that a student uses in explaining something or in describing events or in telling stories.
4. Student's use of quantitative expressions and quantitative reasoning.
5. Student's ability to devise or adopt a systematic strategy for solving problems and to change the strategy if it is not working.
6. Special skills students exhibit that are unusual for their age or grade.
7. Student's innovative use of common materials in the classroom or outside of it.
8. Student's breadth of information.
9. Student's depth of information in a particular area.
10. Student's collections of materials or hobbies.
11. Student's persistence on uncompleted tasks.
12. Student's absorption in intellectual tasks.
13. Extensiveness of student's exploratory behavior.
14. Student's criticalness of his or her own performance.
15. Student's preferences for complexity, difficulty, and novelty in tasks.

Source: Elizabeth Hagen, *Identification of the Gifted.*

information on all children so we can make the best decisions regarding the curriculum, the program prototype and the evaluation procedures that we might use.

I'd like to share some things to give you an idea where I've been going in that particular area. Some of you may know that I have been working on the development of a profile. (Figure 4) This profile suggests to a school district that we look for a variety

FIGURE 4

FRASIER-TALENT ASSESSMENT PROFILE: PILOT FORM

Submitted By:

Name:		DOB:
Date:	Grade:	Sex:
School Number:		Race:
City:	State:	Zip:
Currently Enrolled:		Not Enrolled:

Percentile		0.1		2		16		50		84		98		99.9
Stanine			1		2		3	4	5	6	7		8	9
		Below Average						Average				Above Average		
Dev IQ		52		68		84		100		116		132		148
Std Dev		-3		-2		-1		Mean		+1		+2		+3
Likert Scale	1		2		3		4		5		6		7		8		9		10

	O	S	Test/Rating Scale/Rater Observer/Product/Performance/ Descriptor, etc.
Creativity Aptitude/Achievement			
The Arts Aptitude/Achievement			
Leadership Aptitude/Achievement			
Motivation Self-Report/Observations			
Academic Aptitude/Achievement			

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of ways to access abilities. It includes a multi-scale analysis so that we can interpret information that comes from a variety of sources. The multiple-scale analysis at the top includes Likert Scale, stanines, percentiles, and standard deviations that allow us to compare information across a number of categories. It causes us to put our best minds to work on making decisions based on that information, and helps us to get a little bit beyond the notion of adding points together and coming up with a conclusion. It suggests to us that we should look at a number of things relative to personal characteristics, special language considerations, and certain mediating factors such as one's environment, and how they might impact curriculum decisions, not just how they might impact whether a child is gifted or not. If we follow that process all the way through, you will see that it should lead us into making the best decisions regarding the program options, curriculum options, counseling options that we should use, and also should provide us with optimal information regarding evaluating the progress of the students in gifted and talented programs. To summarize, one of the things that I've tried to show graphically is that the profile does not take information from a number of sources and pull it together into one score leading us to one program. Rather, the profile takes a variety of information from a number of different sources, evaluates that information in terms of the strengths and needs of students, and then uses that information to guide appropriate program, curriculum, counseling and evaluation decisions.

The last barrier to inclusion of economically disadvantaged children in gifted programs relates to curricular adaptation. It's very critical to focus on the fact that once we have identified these students we must address the issue of what we do with them. I have chosen to use the word "adapt," rather than "accommodate," to describe appropriate curriculum practices. To accommodate means to make fit, to adjust, to reconcile differences. It implies a subordinating of one thing to the needs of another, and suggests concessions or compromises. Adaptation, however, refers to a change in structure, function, or form that produces better adjustments of an animal or plant to its environment. In sociological terms, it means a gradual change in behavior to conform to the prevailing cultural pattern. This doesn't mean giving up one's identity to conform to the patterns of another group. I believe that while gifted minority students may need to have certain adaptations made for them in their curriculum, they do not need to be accommodated. To adapt a curriculum means that we are saying to these children that they can be whatever their abilities dictate, while maintaining who they are. The thought we convey to them is "I can be Me, I can be whatever it is that I desire to be," and also, "I am Me."

Now let's briefly look at what some of those curriculum adaptations may be. First of all, I make the assumption that the modifications we make in curriculum to help gifted children develop their extraordinary abilities are the same as we do for all children. I think that Barbara Clarks' delineation expresses it quite well:

> For gifted children, regardless, we should provide them with opportunities and experiences particularly suited to their needs and through which they can continue developing their potential. We should establish an environment that values and enhances intelligence, talent, effective growth, and intuitive ability. We should provide them with the time, space, and encouragement to discover themselves, their powers, and abilities to become all that they can be. We should provide them opportunities to interact with children and adults of various abilities, and to be challenged to know and revere humanity for its uniqueness and its connectedness. And finally we should encourage them to find their places in human evolution by discovering what abilities and in what areas they wish to contribute.

I think those are good suggestions in terms of curriculum adaptations for all gifted children.

From my personal experiences, I would add what I think are a few necessities. The first is that we should establish clear standards of excellence. This is needed as a model for these children. The

second is an emphasis on the skills of future problem solving. I don't say that because I'm from the University of Georgia, and work with Dr. E. Paul Torrance. I think, though, that teaching students skills of futuring gives them a chance to systematically explore a real problem. By learning how to follow through from the identification of a problem to the development of a plan to implement a solution, these children can learn how to create their own futures.

We should be mindful of the need to include in curriculum and counseling experiences techniques of mental imagery and guided fantasy. This will assist these children in developing an awareness of alternative careers and approaches to educational, social, and personal challenges. To use one's imagination is to see all possibilities and to see all that can be done. We should include decision making skills in our curricula. I think we are aware of the fact that life is a do-it-yourself process. However, disadvantaged children may need to learn some of the techniques to make the system more responsive to their needs. These include skills such as persuading, bargaining, and appropriately asserting one's self.

Finally, we should assist these students in getting a mentor. I chose not to say a role model because I sometimes think the notion of role model suggests a person who says, "Look at me, but don't touch. Look at what I did, but don't touch." I would prefer to suggest to you a mentor. A mentor to me is a partner, it's a partner who says, "Let's touch. I see you as a capable individual." "I see you as a diamond in the rough," as Alexinia Baldwin has described these children. "Let's touch, and together make the rough edges go away. Don't do as I say, let's do it together."

In conclusion, I would like to leave you with a few principles. The first is that the gifted are a diverse group and that equals diverse expression and that equals diverse procedures. We cannot continue to hold tenaciously to traditional methods. That would make us guilty of conveying the notion that the gifted are a homogeneous group who demonstrate their potential according to one set of standards and in exactly the same way.

The second is to acknowledge, not only that we must use different procedures to find these children, but we also must consider these procedures to be legitimate. Methods of locating children and youth capable of gifted performance can be varied without eroding quality, and without requiring excessive data collection or expenditure of time. Soliciting inquiries from a variety of sources does not compromise a decision; such solicitations enrich a decision.

Third, focus on gifted behaviors. I strongly believe that data on certain personality traits, socioeconomic factors, and physical traits should be considered *only* as they effect the kinds of curriculum and program that we develop for children, not to determine whether they can or cannot be gifted.

As I was coming to Austin I was glancing through a Time magazine, and I came across an advertisement. It struck my attention because it talked about promises to keep, and I would like to share with you a little bit from that to see if you would join me in keeping promises to all our gifted children. This advertisement showed a father and a child, and it was talking about promises and the father said, "I promise to attend recitals, late meetings withstanding. I promise not to show up when you are with your friends at the mall. I promise to keep it all safe, no matter what..." And it continued, "Nothing binds us, one to the other, more than a promise. Nothing divides us like a promise broken."

I have committed myself, my life, and my work to keeping promises to all of our gifted children. I invite you to join me in eliminating the four barriers and keeping our promise to seeking out all children with extraordinary potential. Thank you very much.

Gifted Learning Disabled Students:

questions and answers

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Over the past 20 years, individuals interested in gifted learning disabled students have raised a number of key questions about this unique population. These questions cover such topics as the seeming paradox contained within the concept of gifted learning disabled students, the characteristics of these students and their prevalence in our school districts, and the best way to meet their curriculum needs. Using the latest research and knowledge about gifted learning disabled students, these questions are posed and then answered in this article.

Dr. Udall will be the keynote speaker at the Conference on Providing Programs for Gifted/ Talented Students, sponsored by the Texas Education Agency, February 16-18, 1992.

Increasing attention is being given to gifted learning disabled children (e.g., Barton & Starnes, 1989; Baum, 1988; Minner, 1990). Although we still lack a solid body of research that supports either specific identification techniques or curriculum models, we have learned a fair amount about these students from a number of small studies (e.g., Baum & Owen, 1988; Harnah, 1989; Hansford, Whitmore, Kraynak, & Wingenbach, 1987; Schiff, Kaufman, & Kaufman, 1981) and shared anecdotal information (e.g., Baum, Emerick, Herman, & Dixon, 1989; Fox, Brody, & Tobin, 1983; Steeves, 1980; Udall & Maker, 1983; Whitmore & Maker, 1985). Our expanded knowledge has led to a greater understanding of the characteristics and needs of gifted learning disabled children and has helped answer a number of key questions about this unique population. These questions and the subsequent answers will be addressed in this article.

Can Children Be Both Gifted and Learning Disabled?

This question arises primarily because of commonly held stereotypes of both gifted and learning disabled (LD) students. Take a moment and think of the adjectives the uninformed might associate with the gifted. For example, one might say that all gifted students achieve in school, while all the time being well-rounded and socially adjusted. Contrast this image with the common one of learning disabled students: awkward, average intellect, not very creative, and socially inept. These distorted images make it difficult, at first thought, to imagine a student being both gifted and learning disabled.

The belief that one cannot be both gifted and learning disabled is further compounded by society's deep-seated need, both philosophically and pragmatically, to fit students into tidy "pigeon holes." This need is reflected in the structure of our school system, where pullout programs and special services exist for identified students meeting strict criteria. One student per "pigeonhole" is the norm; educators are reluctant to consider that some students might require multiple services. This belief translates into the common practice of placing students into either the gifted program *OR* the LD resource room, but not in both.

Yet current definitions of giftedness and learning disabilities embrace the concept of a student who is both gifted and learning disabled. For example, the 1972 United States Office of Education (USOE) definition (the

one most commonly used in programs for the gifted) states: "Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities, are *capable* [italics added] of high performance.... Children capable of high performance include those with demonstrated achievement *and/or potential ability* [italics added]...(Marland, 1972, p. 10)." Similarly contemporary definitions of the learning disabled state clearly that students with above normal intelligence are acceptable; LD students must only demonstrate a discrepancy between ability and achievement, academic failure, and a psychological process disorder (Gearheart & Gearheart, 1989)—all possible problems a gifted child might face. In short, definitions of giftedness and learning disabilities leave ample room to identify gifted learning disabled students; only our attitudes make this reality elusive.

Knowing that gifted learning disabled students are possible is different from believing that they are probable. Yet, when asked, most educators will say they have known a student who is both gifted and learning disabled. Moreover, research supports their experiences. Mauser (1980), in the state of Illinois, found that 2.3% of the identified LD population was gifted, using the simple criterion of having a score of 120 or above on either the Performance or Verbal Scale of the WISC-R. The author found similar statistics in her program for gifted/LD students (Udall, 1985).[1]

Both Mauser and Udall located gifted students *within* the learning disability population. Such students are initially referred for special education services because their learning problems draw attention while also disguising any giftedness. When tested, high intelligence scores are uncovered. Most of the research on gifted learning disabled students is conducted with this population.

However, in addition to the group of students found in special education programs, two more "hidden" groups of learning disabled gifted students are in our classrooms. The second group of students are in the gifted programs with some learning problems. Teachers or parents might wonder if these students are learning disabled, but because the child is in the gifted program, little is done. The final group of students are in regular classrooms. These students "get by," and therefore, neither their giftedness nor disability is ever recognized.

Because so many gifted LD students may remain undiscovered, the exact prevalence of this population may never be known. Yet, clearly, these children are in our classrooms in large enough numbers to warrant attention. Therefore, if we are going to locate gifted/LD students we must not only employ expansive definitions (such as the USOE one cited above), but we also need to be familiar with the behaviors these students exhibit.

What Do Gifted Learning Disabled Students Look Like?

Gifted learning disabled students possess the same characteristics any gifted students have—for example, ability to see complex relationships, heightened sensitivity to people and ideas, and quickness of mind. In addition, they have many traits of learning disabled students—difficulty processing information, low self-esteem, and poor academic skills.

However, gifted learning disabled students manifest these characteristics in a different way than either of these groups. Comparison studies of gifted, gifted/LD, and LD students have shown that gifted learning disabled students are a distinct population. One notable study, conducted by Baum and Owen (1988), found that gifted/LD students are more creative than their LD peers and seem to have more productive extra-curricular activities than both of the other groups. However, the gifted learning disabled students are also more disruptive in school, do not fit in well with peers, and are more likely to see themselves as academic failures than the other two groups. Baum and Owen conclude that this

[1] The only rare students in this program were females; in six years, out of over 100 students, only four girls were identified.

sense of inefficacy in school is the distinguishing factor among all three groups.

In addition to comparison studies, a number of individuals have listed behavioral traits of gifted learning disabled students (e.g., Baum & Owen, 1988; Silverman, 1987; Udall, 1985). Figure 1 lists a compilation of these characteristics. Notice how these students demonstrate characteristics of both gifted and learning disabled students. Nevertheless, because research is limited primarily to one type of gifted LD student, be cautious of making too many generalizations. Because these students exhibit such a wide assortment of behaviors that may vary from one setting to another, identification techniques need to be as expansive as possible.

How Do We Identify Gifted Learning Disabled Students?

Once a general idea of characteristics is determined, identifying gifted learning disabled students becomes the next priority. A case study approach is the best identification method. Such an approach is simple: collect as much information as possible from as many sources as possible, and then review each student (or "case") individually for placement.

The first stage is to collect referrals of possible students. Referrals can be collected formally or informally. Teachers are usually the most likely source. In one study in Texas, over 30% of the referrals of high ability learning disabled students came from classroom teachers (Boodoo, Bradley, Frontera, Pitts, & Wright, 1989). Besides the classroom teacher, other referral sources can be tapped. These include parents, teachers of the learning disabled, teachers of the gifted, psychologists or diagnosticians, social workers, counselors, community leaders, and principals, as well as test scores.

Once students are referred, a variety of information can be collected. Sources include intellectual testing (e.g., WISC-R), achievement testing (e.g., the Woodcock-Johnson), process testing (e.g., the Detroit), student interviews, student self-evaluation, parent inventory, teacher inventory, developmental history, student products, classroom observation, and past records.

In a case study approach, the final identification stage is to review the gathered data to determine if 1) the child is gifted and learning disabled and 2) if so, then can he or she benefit from the services in the school district. Two questions should be asked when making the first determination: 1) does the child clearly demonstrate both giftedness and a learning disability and 2) what children show the most potential giftedness in face of the most severe disability? When ascertaining

FIGURE 1

Characteristics of
Gifted Learning Disabled Students

1. verbal expression—i.e., has lots to say about topics of interest
2. problem solving skills
3. sense of humor
4. leadership
5. creativity in arts, music, drama
6. low motivation; in the classroom
7. a fear of taking risks in the school setting
8. good memory for topics of interest; poor memory for academic tasks
9. difficulty on timed, written tasks
10. short attention span
11. easily distracted; highly energetic
12. poor self-concept
13. not interested in details
14. extremely poor organizational skills
15. uninhibited in expression of opinion
16. varied interests outside of the classroom

the possible benefits of placement, the primary consideration is matching the child's curriculum needs with the program offerings.

Can Gifted Learning Disabled Students Be Served In Our Schools?

Even given the design of schools and the difficulties in identification, the needs of gifted learning disabled students can be met within the current structure. However, certain conditions are necessary. First, the belief must be accepted that gifted learning disabled students exist and need services. Then, educators of the gifted and learning disabled must learn to talk to each other more and work collaboratively. Finally, students must have access to all appropriate services.

If this groundwork is laid, a number of service delivery models are available. Various school districts have used such alternatives as 1) a self-contained program for gifted LD children, 2) basic placement in the regular classroom and pullout into the LD program and/or the gifted program and/or a resource program for gifted LD students, or 3) gifted and talented placement with pullout into the LD program or the regular classroom. Appropriate curriculum can also be designed within the regular classroom or a magnet school setting, if help is offered from specialists.

What Are The Curriculum Needs Of Gifted Learning Disabled Students?

Regardless of placement, gifted learning disabled students have both remediation and enrichment needs. Yet, quite often the sole focus is on their poor academic skills. This remediation emphasis often occurs because of the pressing classroom problems many of these students have, such as inappropriate academic or social behavior, extreme reluctance to take risks, short attention span, lack of any products to assess, avoidance of written assignments, and a well-developed ability to manipulate. Consequently many gifted LD students participate in enrichment activities only *after* other assignments are complete. By using this "contingency plan," we say to students: "we care most about what you cannot do." Enrichment and challenge activities become secondary.

Susan Baum (1988) strongly disagrees with this approach. In fact, she says these students need a supportive environment that values their strengths before anything else. She cites her research that shows gifted LD students have a low sense of success in school; therefore giving them remedial tasks only increases their sense of failure in the school setting. Tannenbaum and Baldwin (Tannenbaum & Baldwin, 1983) also support Baum's position. They call these children "paradoxical learners"—the harder the task, the better they do; it's the easy work they can't master. In short, gifted learning disabled students need challenge.

Therefore, gifted learning disabled students need a curriculum that addresses both their strengths and weaknesses. A number of suggestions are offered in Figure 2, while more ideas can be found in Baum, 1988; Daniels, 1983; Fox et al., 1983; Moller, 1984; Silverman, 1987; and Wolf & Gygi, 1981.

Conclusion

As educators of the gifted, it is our responsibility to serve *all* gifted students. Sometimes, the successes of the Einsteins and Edisons of the world, who succeeded without much school support, lull us into believing that all gifted learning disabled students can perform the same feats. However, evidence suggests that for every student who succeeds many more fail during their journey through the school system. In short, gifted learning disabled students desperately deserve and need appropriate services.

This is not to say that such a task will be easy. Working with gifted learning disabled students takes a strong commitment. They can be hard to work with and difficult to reach. This statement is particularly true if we are used to working with non-learning disabled gifted students. Behavior and social skills often get in the way, as well as the lack of academic skills. However, even given these difficulties, the reward of reaching a once unreachable student is well worth it. As one anonymous gifted learning disabled student says:

"How will I ever get any better,
If no one has the time to teach?
If I sit on the sidelines all my life,
What goals will I ever reach?
I can't keep up with kids in class,
Don't compare me to my brothers.
Just give me a chance to grow at my pace,
Without competing with the others.
Wish someone would try to teach me,
Though I can't learn like the rest.
If someone cared enough to reach me,
I promise, I'd really do my best."

FIGURE 2

Teaching Strategies For
Gifted Learning Disabled Students

1. Let the student watch others before attempting the task.
2. Use visuals and hands-on experiences.
3. Let the student discover her own method of problem-solving.
4. Give the student advanced material, even if easy material is not done.
5. Use material that is of interest and relevant to student.
6. Use modern technology to help the student compensate, such as computers, calculators, tape recorders.
7. Use bibliotherapy techniques.
8. Use contracts or reward systems.
9. Use a buddy system for less appealing tasks, such as library assignments.
10. Pair a gifted LD student with a gifted non-LD student.
11. Provide gifted learning disabled role models.
12. Break long assignments into shorter pieces.
13. Emphasize science, social studies, and fine arts.
14. Conduct structured oral discussions.
15. Do creative endeavors.
16. Allow students to "shine" in front of peers.
17. Provide mentors and intellectual peers.
18. Use self-talk techniques.

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The Bilingual Gifted:

VIABLE STRATEGIES FOR EFFECTIVE PROGRAMMING

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Who are the bilingual gifted? Why is it important that American educators be trained in identifying and nurturing bilingual gifted students? These are two questions that are addressed in this article.

Research indicates that there is an underrepresentation of bilingual students in gifted programs. This is happening because educators are not trained to assess students' cognitive abilities in languages other than English.

Efforts at both the state and national levels are encouraging school districts to identify larger numbers of bilingual and limited English proficient students for gifted programs. However, there is little encouragement given to train bilingual teachers and administrators to work with gifted students.

Bilingual educators need to be trained to identify bilingual gifted students and provide effective programming that addresses the students' intellectual, creative, and linguistic needs.

What does it mean in our American educational system to be both bilingual and gifted? It means valuing a student's high academic performance capabilities while simultaneously valuing his or her competency in listening, speaking, reading, or writing a second language.

As educators, we encourage students to study a "foreign language," such as German, Russian, or Japanese, but what kind of encouragement do we give to students who enter school already speaking a second language such as Spanish or French? Sometimes, assumptions are made that children with Hispanic surnames *are* bilingual and children with Anglo surnames *are* monolingual. Erroneous assumptions are also made that children who demonstrate verbal competency in a native language, such as Spanish, but limited proficiency in the English language, do not have superior cognitive ability.

Such assumptions and misplaced values must be addressed when developing and implementing programs for bilingual gifted students in our schools. This article proposes some viable strategies for improving the identification process and teaching strategies as they address the special needs of bilingual gifted students.

THE IDENTIFICATION PROCESS

Traditionally, bilingual students have been underrepresented in gifted programs, although it is estimated that three to five percent of the Hispanic population are gifted and talented (Martinson, 1974). It has been almost seventeen years since the first research was conducted on gifted Mexican American children (Bernal & Reyna, 1974), yet including children from the Mexican American culture who speak the Spanish language is still not a common practice among American educators in gifted programs. Researchers have found that standardized test instruments, available only in the English language and then translated into the Spanish language with disregard for linguistic differences among Cuban, Mexican, or Puerto Rican cultures, or

normed with insufficient numbers of bilingual students, could be reasons for the underrepresentation of bilingual students in gifted programs (Moreno, 1973; Torrance, 1977).

In geographical areas, such as the Rio Grande Valley, where bilingual students are abundant and gifted education is mandated, the problem of identifying bilingual gifted students is of tantamount concern. Coordinators and teachers in gifted programs learn through workshops, conferences, and courses about traditional practices using "multiple criteria," "cut-off scores," and "matrices" in the identification process. Educators in Rio Grande Valley school districts also learn through experience that these traditional practices need to be modified or discarded when they exclude bilingual and limited English proficient students from gifted programs.

Administrators and teachers need to be trained in collecting, analyzing and utilizing student data obtained from a variety of sources. These sources include standardized test information on cognitive and affective abilities and skills; professional assessment of student performance through interviews, problem solving activities, and creative product development; recorded behavioral observations of students by teachers, administrators, parents, and students themselves; and assessment of student attitudes, interests, strengths, needs, and learning styles.

Recommended practices

Before this process of data collection begins, educators need to plan and develop an evaluation design for determining effective procedures to be used with bilingual populations. Obvious modifications include translation of testing material, directions, and questions into the native language (Spanish) or selecting materials and activities that do not require interpretation, verbal, or written response in the English language. Identifying bilingual staff (administrators, teachers, aides, counselors) who can assist in the data collection, analysis, and evaluation stage of the identification process also is important. This may involve active recruiting on the part of the school district as well as additional training for school staff not traditionally involved in the identification of gifted students. Bilingual staff need to train and counsel parents of bilingual children in interpreting and providing information that can be helpful in planning for individual students in gifted programs.

Collecting and analyzing non-test data *first* will also enlarge the talent pool of potential candidates for the gifted program. Assessing the bilingual student's ability to think critically and creatively, and solve problems in the native language (Spanish) as well as in English should be an integral part of the identification process. If higher

levels of competency are measured in the native language (Spanish), this data should be recorded under "special language considerations," on a data summary sheet and should be assessed as a strength in the student candidate, rather than a deficit. Further, appropriate modifications recommended for future programming, such as continued interaction with and evaluation by trained bilingual staff working with the gifted program, should be considered.

Erroneous assumptions are also made that children who demonstrate verbal competency in a native language, such as Spanish, but limited proficiency in the English language, do not have superior cognitive ability.

Educators need to be trained in using Frasier's Talent Assessment Profile (1990), as it will allow them to visually interpret the data collected on individual students (see page 8). More importantly, for bilingual students, the profile will encourage educators to look at strengths and weaknesses in individual students and propose appropriate program modifications that address linguistic abilities and needs.

CURRICULAR AND PROGRAM STRATEGIES

Although local school districts are reinforced at the state and national levels to identify bilingual, limited English proficient, and economically disadvantaged students for gifted programs, little effort is being made to identify and train bilingual administrators and teachers to work with gifted students. Developing and modifying curriculum to address academic and linguistic needs requires staff who have been trained in utilizing effective teaching strategies for bilingual education as well as gifted education. In evaluating bilingual gifted students' cognitive skills, the teacher must be sensitive to children who may need more time to respond to a verbal or written question because they process information in their native language first, and then translate into English to communicate with the English-speaking instructor. Children from culturally diverse, linguistically different, and economically disadvantaged populations learn by experimenting and testing a variety of alternatives. Such a process is time consuming and is not rewarded by a high score on a timed test.

Researchers have found that the styles of learning and thinking used by culturally diverse and bilingual populations are different from Anglo and monolingual populations (Cohen, 1973; Ramirez, Casteneda, & Herold, 1974). My findings in a 1988 study conducted among 120 Hispanic and non-Hispanic seventh graders in California were consistent with earlier studies. Using the Style of Learning and Thinking (SOLAT) instrument (Torrance, McCarthy, & Kolesinski, 1988) consisting of 50 items based on the cumulative research findings concerning the specialized functions of the left and right hemispheres, I was able to analyze the learning and thinking preferences of bilingual and monolingual students. I found that bilingual students preferred using integrated hemisphere functioning when processing

information while their monolingual counterparts had a preference for left hemisphere functioning.

Recommended practices

Teachers of gifted students need to be trained in recognizing different learning and thinking styles among bilingual and monolingual populations. In addition to learning how to differentiate curriculum for gifted students, teachers, and administrators need to learn how to develop and modify curriculum activities as well as teaching strategies that will nurture different thinking and learning styles in students. Teachers in gifted programs need to learn a variety of questioning strategies that encourage students to analyze and synthesize ideas as well as solve problems in a logical manner and in an intuitive manner.

Teacher training and flexible administration is crucial to any educational program. For gifted programs, it means finding appropriate staff to meet the needs of gifted learners. Identifying and recruiting staff who are sensitive to the needs of all gifted students is an important task of school administration. Acknowledging that the gifted have cognitive, affective, and linguistic needs is especially important in school districts that have large populations of culturally diverse and linguistically different students. In schools where larger numbers of bilingual and limited English proficient students are being identified for gifted programs, particularly at the kindergarten and first grade level, it is imperative that bilingual staff be recruited as teachers, counselors, and coordinators.

To assist school districts in the Rio Grande Valley in providing differentiated learning experiences for bilingual gifted students and providing training opportunities for teachers and administrators to work with bilingual gifted students, the gifted program at the University of Texas—Pan American sponsors a Saturday program, Challenge, for gifted children ages 4 through 14 and an International High School for Bilingual Gifted Students in the summer. The Saturday program, which is located at four sites in the Rio Grande Valley from Brownsville to Rio Grande City, is coordinated by graduate students in the master's degree program in gifted education at UT-PA. This university-based program is unique in that it includes students from the Mexican side of the border and hires bilingual staff who can instruct gifted students who are bilingual as well as limited English proficient.

The International High School has been designed to address the academic, social, and linguistic needs of bilingual students from the United States, Mexico, and Canada. High school students who already speak two languages fluently are encouraged to learn a third language so that they can discuss solutions to problems addressing teenagers in the three

countries. Students then have the opportunity to practice their language and problem solving strategies as they travel each summer to one of the three countries.

If the United States is to maintain its leadership role among nations, then it must produce leaders who have the ability to communicate in more than one language.

Both the Challenge program and the International High School are laboratory schools for bilingual gifted youngsters in which new ideas are tested and evaluated. Data from both programs is being used by researchers as the basis for a longitudinal study of bilingual gifted students.

SUMMARY

In developing viable strategies for effective programming for bilingual gifted students, it is imperative that educators understand that students possess skills and competencies that are transferable across languages. Educators need to design and evaluate better methods for identifying students' abilities to think and solve problems in more than one language. Similarly, educators need to design and evaluate better methods for teaching students who are both bilingual *and* gifted. It is recommended that teachers and administrators be well trained in both gifted education and bilingual education.

By the 21st century, it is anticipated that the bilingual population in the United States will increase dramatically, If the United States is to maintain its leadership role among nations, then it must produce leaders who have the ability to communicate in more than one language. Bilingual gifted students who are identified and encouraged by educators and parents to develop their linguistic, intellectual, creative, and leadership abilities, can provide this talent pool of future leaders.

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An Update on The Javits Project:
IDENTIFYING AND SERVING DISADVANTAGED GIFTED YOUTH

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In 1990, the Texas Education Agency became one of the first 28 recipients for federal funding under the provisions of the Jacob K. Javits Gifted Students Education Act of 1988. Evelyn Levsky Hiatt, who coordinates the Agency's efforts relating to the Javits grant, offers a brief overview of the project, emphasizing preliminary information on the Texas Student Portfolio.

There is increased interest these days in accountability of the public education system. There also is increased interest in assuring that our schools are both equitable and excellent. How may we reflect these two interests? How can we assure that schools are seeking to incorporate both of the elusive qualities of equity and excellence?

One way is through an investigation of the programs that school districts establish for gifted and advanced level students. Why the program for gifted students? If we believe that all students can learn and that all student populations are capable of high performance, and if we are equitably assessing all students' abilities, then all groups of students should be fairly represented in programs designed to meet the needs of our most able students. Thus far, however, it must be admitted that this has not been the case. Minority students, and particularly those from low socio-economic backgrounds, are not fairly represented in these programs. Ortiz (1989, 152) offers data from a report from the U. S. Department of Education's Office of Civil Rights that revealed "minority groups such as blacks, Hispanics, and Native Americans are underrepresented by as much as 70 percent in gifted programs."

This exclusion is harmful for two reasons. First, it sends a negative message to underrepresented populations who are not included in the programs. It implies that they are somehow less able than those in other populations. Just as harmful, however, is what it says to those populations who are included in the program. It sends a message to them that they are somehow superior to other groups of students—that simply by being born into a certain race or economic class they were bestowed with rights and abilities that other students do not possess and never will. Such a message is clearly incorrect. It also is clearly in conflict with American principles of equal rights and opportunity for all citizens. It was to redress this doubly negative message that the Texas Education Agency actively sought participa-

tion in the federal effort to determine new and better ways to identify and serve those populations that are underrepresented in programs for gifted students.

The problem of underrepresentation in Texas is of more concern than it might be in other states. As the chart in Figure 1 indicates, although Texas has a school population that includes a majority of ethnic and racial minorities, the program for gifted students fails to reflect this trend. Further, unlike other states with laws that block innovative approaches to student assessment, Texas has rules that offer districts great latitude in student selection. Mindful of the research in the field, the State Board of Education adopted rules that stress the use of multiple criteria, require that both standardized and non-standardized measures be used, and that a student selection committee make the final determination as to which students would most benefit from program services. In fact, in one of the clearest messages for equity, the State Board requires that "Data and procedures used during the identification process shall be designed to assure that the population of the program for gifted students reflects the population of the total district." (19 TAC, Chapter 89, Subchapter C). Despite these efforts, actual practices are lagging far behind the sought after results.

FIGURE 1

Ethnicity	1990-91			
	G/T Students		All Students	
	No.	%	No.	%
African American	15,956	6.90	487,077	14.40
American Indian	310	0.13	6,294	0.19
Asian	8911	3.90	67,743	2.00
Hispanic	41,305	17.90	1,145,765	33.90
White	164,167	71.20	1,676,008	49.50
TOTAL	230,649	100.30	3,382,887	99.99

Harry Passow (1986, 223) has noted that one paradox regarding education of the gifted is that, "so much has remained unchanged...and yet so much has changed." Despite changes in the student population, despite new State Board rules that provide great flexibility in student assessment, districts tend to rely on traditional standardized tests for program placement. Other measures are reviewed, but over and over, provisions such as, "Students must score at or above the 97% in order to be considered for the program" are found in district identification procedures. In some cases, students who clearly are succeeding in the program are exited simply because their test scores dropped. Such practices are never acceptable because they are arbitrarily exclusionary and because they do not adequately reflect true student ability or potential. However, if the Agency is going to insist upon a more open assessment system, it also has to offer acceptable options. The Javits program provides the opportunity to assist districts in their search for more equitable student assessment.

When federal funding became available under the Jacob K. Javits Gifted Students Education Act of 1988, the Texas Education Agency was one of 231 applicants who sought funding to meet the grant's objective: to investigate non-traditional approaches to identifying and serving those populations underrepresented in programs for the gifted. These included not just racial and ethnic minorities, but rurally isolated students and girls in fields such as science and mathematics. In 1990, the Agency became one of only 28 grant recipients and began its efforts to assist districts in living up to the principles embodied in the State Board's rules.

As noted by Frasier (see page 2), there are four major problems that hold underrepresented populations back from being identified and served in gifted programs. Those four problems relate to the

attitudes of educators regarding the abilities of disadvantaged children; screening procedures that limit access to the program for gifted students; the assessment measures, which favor IQ and achievement tests; and the emphasis on accommodations, rather than adaptations, to the curriculum. These four themes became the focus of the Javits project. During the 1990-91 school year, Agency staff worked with individual campuses and districts, as well as with six regional education service centers, and field tested two non-traditional assessment measures. Although these measures are still being refined, the information that was gathered provides interesting insights into the problems that confront us. However, it is important to stress that these measures are not designed to take the place of other assessments, including standardized tests. Rather, they are to be used as a complement to them, to provide a holistic portrait of the child that will assist educators in appropriately developing programs that meet the needs of students and in appropriately placing students in those programs.

Remember, unlike an objective test that provides a snapshot of a child on a given day, the portfolio provides a videotape that takes place over time.

The two measures that are being field tested are the Texas Student Portfolio (TSP) and Activity Placemats (the Mats), both of which were developed by Dr. Sandra Kaplan as part of an earlier Agency project, the Institutes for Teachers of the Young Disadvantaged Gifted. Both are designed to assess some of the characteristics that are traditionally associated with gifted students, focusing on traits associated with critical and creative thinking. They are intended for use with all students and should be used as part of the general program provided in the early grades. While this article will focus on the TSP, future articles will discuss the Activity Placemats and their use in the assessment/curriculum process.

The TSP, like other portfolios, is a collection of the student's best work. Unlike other portfolios, however, that currently are being used in other states, the TSP does not measure skills related to specific subjects. In fact, the eight descriptors, like those that form the basis of the Mats, relate to student learning characteristics. The eight descriptors, included in Figure 2, focus on skills related to learning, creativity, and motivation. It is recommended that a minimum of six items be included in the portfolio, which is reviewed by a committee or team of educators who have received training on the TSP. Data from the portfolio then serve as one indicator that would be reviewed by the screening committee for the program for gifted students.

The TSP reflects current research on student assessment for programs for gifted students in the following ways.

- It is inclusive rather than exclusive in its assessment of students. It is recommended that all students keep a portfolio, particularly in the early grades. Every student is then, in a sense, nominated for the program for gifted students. Nominating all students does not dilute efforts at identification, but enhances them. Frasier (1984) suggests that "soliciting inquiries from a variety of sources does not compromise a decision; such solicitations enrich a decision." By using the TSP as a "child find" measure, students who might otherwise be overlooked are encouraged to show their best efforts to school decision makers.

- It assesses all student products against the same eight descriptors. These descriptors focus on manifestations of behaviors related to learning ability, creative ability, and motivation. Additionally, they are not age specific and can be used with students at any grade. This means that, while the sophistication of the products clearly will change, the behaviors that are being assessed remain constant throughout the kindergarten through grade twelve continuum.

- It includes products from both in-school and out-of-school settings. Hagen (1980) stresses the importance of focusing on out-of-school

FIGURE 2

Texas Student Portfolio Profile Descriptors

The descriptors used on the Texas Student Portfolio Profile relate to characteristics of learning, creativity, and motivation. Notice that the focus is on how students **learn** rather than on what they know. As an example, the student's use of language is emphasized rather than the level of the student's vocabulary.

Descriptor	Behaviors Associated with Gifted Students	Evidence of Behaviors As Manifested in Student Products
Unusual presentation of an idea	Use of expressive speech (Torrance, 1977); Tries to do things in different, unusual or imaginative ways (Clark, 1988).	Given a class assignment, students may develop products that are very different from those of other students. Products may appear eccentric, odd, or offbeat but are highly original and successful at either meeting the class assignment or student's objective for developing products. Student may use language in unusual and/or unique ways.
Work advanced beyond age or grade level	Has advanced ideas for age, interested in "adult" issues (e.g., sex, race, religion) more than usual for age level (Witty, 1955; Ward, 1961; Schuman, 1979); Exhibit special skills that are unusual for their age or grade (Hagen, 1980).	In younger children, products include details not normally provided in products of other students of similar age. Older students may address issues not usually of interest to chronological peers. Products from students at all ages may reflect whimsical or sophisticated sense of humor, either in the product itself or in the student's description of it. Products may reflect knowledge of material or technology not previously introduced in class.
Complex or intricate presentation of an idea	Originality of ideas in problem solving (Torrance, 1977); Preference for complexity, asymmetry, open-endedness (Clark, 1979); Preference for complexity, difficulty, and novelty in tasks (Hagen, 1980).	Students frequently include elaborate detail in both written and visual products that reflect considerable planning and organization. Often, students will include evidence of sophisticated problem solving skills in development of products. This descriptor frequently is evidenced in conjunction with "Unusual presentation of an idea."
In-depth understanding of an idea or skill	Is a keen and alert observer, usually "sees more" or "gets more" out of a story, film, etc. than others (Carroll, 1940; National Education Association, 1960; Witty, 1958); Able to set up new problem, senses what is important (Schuman, 1979); Students breadth and depth of information (Hagen, 1980).	Students often evidence understanding of the "big idea" of a discipline or topic and apply it in their product. Products often reflect out-of-school interests, and students may comment on long-term interest in a topic or an intense interest unusual for students at that age.
Resourceful and/or clever use of materials	Ability to improvise with commonplace materials and objects (Torrance, 1977); Innovative use of common materials in the classroom or outside it (Hagen, 1980).	Students use household "stuff" or innovative vocabulary in development of products. Products often reflect keen sense of humor, puns, or new and novel ways of using language and/or materials.
Evidence of support of research for the idea	Quality of examples, illustrations, or elaborations that a student uses in explaining something, in describing events, or in telling stories, extensiveness of student's exploratory behavior (Hagen, 1980); Synthesize ideas and information from a lot of different sources (Clark, 1988).	Students use elaborative examples and illustrations to expand upon the main ideas of a product. Research often is done at a level not normally expected at student's age level. This can include the use of techniques such as informal interviews or surveys in younger children or the use of unexpected primary and secondary resources in the products of older students. In some cases, extensive reading, questioning, and/or research has taken place prior to the development of the product.
Organized to communicate effectively	Able to organize themselves and ideas (Martinson, 1974); Likes to organize and bring structure to things, people, and situations (Gowen & Demos, 1964).	Products are presented in a clear, concise, and sequenced manner. In both creative and expository products, an effective medium is selected to deliver the message and to communicate it to the selected audience. Visual products catch the eye and further enhance the main idea of the topic presented.
Evidence of high interest and perseverance	Becomes absorbed and truly involved in topics or problems (Brandwein, 1955); Persistence on complicated tasks; extensiveness of student's exploratory behavior (Hagen, 1980); Enduring interest or curiosity in some field (Baska, 1989).	Products reflect long-term interest or commitment on the part of the student or may reflect outside-of-classroom study, reading, or concerns. A teacher or parent may indicate that the student worked on the product longer than would be expected for age and grade level.

Developed by Evelyn Levsky Hiatt and Dr. Judith Martin

efforts because, "children spend a relatively small part of their time in school, and the opportunities they have to show certain abilities are limited in many school settings." By requesting products from the home setting, the TSP develops in parents an awareness of the behaviors of gifted children, and encourages parental involvement in the assessment process.

- It offers the opportunity to observe student growth over a specific time period and focuses on how each student progresses on an individual basis. A student who has not had many enriching experiences may have products that seem less exciting than his or her age peers. The TSP enables educators to observe how quickly students pick up skills and develop more sophisticated products once they have been exposed to school experiences and materials.

- It empowers teachers by increasing teacher competencies and skills. Training both on gifted education and on the manifestation of giftedness in student products is a part of the portfolio assessment process. While this is done to assure greater inter-rater reliability among assessment committee members, use of this training does not end at the conclusion of the selection process. The training encourages teachers to focus on student strengths and improves instruction provided to all students. As teachers become more proficient at assessing student abilities, they become more proficient at modifying the curriculum to meet student needs.

- It provides an opportunity for those who participate in the assessment process to better understand the diverse cultural and economic backgrounds from which the students come. Those cultural and economic factors that impact particular student products are not used as an excuse, but as an explanation, for the differences one might find in the work of various children. Maker (1989) notes that during the assessment process, "Each child must be viewed as an individual, with knowledge of inter- and intragroup differences in values and other cultural characteristics used as the means to *interpret the behaviors observed* in students, rather than to predict what behaviors will be exhibited. [Italics part of original quotation.]"

- It links the identification process to program and curriculum. Evaluating portfolios provides insight into student interests, strengths, and abilities. This information should be used to develop a curriculum tailored to student needs and self selected areas of study.

When used in conjunction with other assessment instruments, the Texas Student Portfolio provides information on students that enables educators to obtain a more comprehensive view of students' strengths and potential.

Both the Mats and the TSP serve to shift the emphasis of the assessment process to what Ernesto Bernal refers to as "a search for talent (1974, p.7)." Bernal goes on to stress the need to look at how quickly students progress rather than on their school achievement tests that focus on content that may be foreign to them. In other words, the emphasis should be on how they learn rather than on what they know. Even after students are initially selected for the program for gifted students, the TSP should be maintained by the student as he/she moves through the primary grades. Remember, unlike an objective test that provides a snapshot of a child on a given day, the portfolio provides a videotape that takes place over time. Educators have the opportunity to see how the child develops as he or she becomes more acclimated to school.

Success during the first year of a three year project is difficult to assess. Neither the portfolio nor the Mats are ready for general distribution, but a great deal was learned from both. One of the exciting positives about the TSP is that teachers report that children become more analytical about their own work. Many students indiscriminately place products in the portfolio. When the teacher asks the student to select his or her best work, the child is forced to review his or her own efforts and determine what was well done and why. Even

very young students start to be more discerning in reviewing their products, thus applying critical thinking skills.

Also, parents become more involved in the school process. Teachers reported that most parents did not respond very well after receiving a letter from the school explaining the portfolio, but that interest increased after parent/teacher conferences or larger group sessions such as PTA meetings. Involvement of parents in their children's learning is always beneficial and the TSP offers parents the opportunity to support their child's efforts for success.

There also were some problems discovered during this first year. Training related to both measures must be enhanced to include a component on cultural diversity and its impact on student products and behaviors. Characteristics of gifted students are the same regardless of their background; however, the manifestation of those characteristics can be very different. As an example, some students will express intense curiosity by manipulating objects and studying them closely instead of asking the teacher a lot of questions. This year, training packages that address the review of student products and that diminish the impact negative attitudes can have on student assessment will be field tested in selected districts.

One distressing finding related to the insecurity that many teachers felt regarding their own perceptions about student potential. Over and over, a teacher would remark that a particular student did extremely well on the Mats or had exciting and innovative products in her portfolio. This would be followed by, "But they can't be nominated for the gifted program—their readiness scores were so low!" Hopefully, as teachers become more comfortable with these non-traditional procedures, they also will gain more confidence in their own abilities to assess student potential.

Teachers and administrators also complained that the portfolio took a great deal of time to process. It is true that each portfolio can take as much as 20 minutes to review, but the information that is gathered is extremely beneficial to planning the child's school program. Most important, it must be admitted that the easy part of student assessment is over. As we learn more about intelligence and its multi-faceted nature, it will be harder and harder to rely on objective data to make decisions for us. The best way to make a knowledgeable decision about the placement and program that is appropriately challenging for a child is to talk about that child's performance and possibilities with other educators. If we are committed to the idea that education should be based on the individual needs of the child, we must analyze the individual child. That is a time consuming process, but one that is rewarding, both to those in the educational profession and, most important, to the children whose futures we hold in our hands.

Clearly, our work on the TSP and on the Activity Placemats is just beginning. Indeed, they only represent the first step of the total Javits project. During the upcoming school year, as we refine the portfolio and placemats, work will begin on developing a curriculum that has been adapted to meet the needs of a diverse student population. Because they reflect a desire to tailor programs and practices to the needs of students, rather than forcing students to fit into preconceived programs, the rich variety of options that are being developed by Javits projects throughout the country ultimately will strengthen the educational system.

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Identifying and Serving Diverse Populations: QUESTIONS AND ANSWERS

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How do the rules adopted by the State Board of Education facilitate the identification of gifted students from diverse populations?

The State Board of Education rules regarding student participation are based upon best practices and recommendations in the literature. As an example, the *National Report on Identification of Gifted and Talented Youth,* commissioned by the United States Department of Education in 1982, states that both formal and informal assessment procedures are necessary to avoid bias. Patton, Prillaman, and Van Tassel-Baska (1989) recommended that state departments of education assist in increasing identification and services for disadvantaged gifted students by developing policies that allow for both qualitative and evaluative sources of data, including nominations, individual tests/assessments, and past performance. Maker (1989, 296) advocates using "a case study approach in which a variety of assessment data is interpreted in the context of a student's individual characteristics, and decisions are made by a team of qualified individuals."

Texas requirements to use multiple criteria, including both subjective and objective measures, and a committee trained in gifted education to make final decisions regarding placement of students in the gifted program are consistent with these recommendations. The broad definition of gifted/talented students used in Texas is also indicative of efforts to be inclusive in the identification process.

There is a State Board of Education rule that requires that the population of the program for gifted students reflect the population of the total district. Does this mean I must adopt a quota system in order to meet this rule?

You absolutely should not establish a quota system in order to meet this rule. Frasier (1989) states that a quota system implies that certain children may be "second-class" gifted. It is our belief that it is not necessary to use quota systems when proper procedures are followed and alternative and non-traditional assessments are used. The rule, 19 TAC §89.51(c), states that data and procedures used during the identification process shall be designed to assure that the population of the program for gifted students reflects the population of the total district. By using committees to assess collected data, we are using procedures that will allow us to make decisions about appropriate educational placement of students. Stress should be placed on the data collected, procedures used to collect the data, and the committee review of the data. By reviewing the tests we use, analyzing the types of questions we ask teachers about their students, and by observing children in their "in-school" and "out-of-school" activities, a clearer picture should emerge. As suggested in Frasier's article, we must do more than give lip service to the recommendation of using a variety of sources to identify gifted behaviors.

Isn't it more difficult to identify students from diverse populations in the primary grades, particularly those who may come from economically impoverished backgrounds? Shouldn't we wait until they have been in the system awhile and see how they progress?

In 1978, Witty suggested that gifted minority students be identified as early as possible. Alexinia Baldwin, Ernesto M. Bernal, Irving Sato, and others have recommended that gifted students from special populations be identified at an early age so that appropriate services can be provided and gaps in skills and abilities can be avoided.

This question has been asked often and seems to reflect the general problems we have had in identifying gifted students. Many of our practices in the past have indicated that we place our confidence in test scores rather than professional judgment regarding student behaviors and potential capabilities. One advantage to using non-traditional assessment measures such as the Texas Student Portfolio is that it allows us to look at how rapidly students progress once we are able to begin the nurturing they may not have had in the past.

One first grade teacher reported this past year that while she felt she had always had high expectations for all students, she now realized that many minority students are capable of doing much more than she had thought previously. After comparing results of the Ravens Test and a traditional verbal test on which the district had been relying, she realized her expectations had not been high enough for many minority students. She said that she looked at the scores on the Ravens and thought, "If they can score that high on this test, then I should be taking them along at a faster pace in my classroom rather than locking them all into the same category." After making the adjustments, she reported they are keeping right up with her. This is an example of the attitudinal changes to which Frasier refers.

You refer to non-traditional assessments. What do you mean?

Traditional assessments would include intelligence tests, achievement tests, grade point averages, and teacher input. Non-traditional assessments would include portfolios, interviews, situational observations, and parent input.

I have heard some criticism concerning the use of intelligence tests in the identification of gifted children from diverse populations. Would you explain the abuse of such tests?

Intelligence tests may be used effectively if you remember they are only one source of information. Rigid cut-offs enabling a child with an IQ of 131 to enter a gifted program, but denying entrance to a classmate who scores only 128 often are used (Kaufman and Harrison, 1986). This procedure would not be appropriate for assessing students from any population. Reliance on IQ tests alone has greatly diminished the potential number of students who are offered program services (Cohen, 1988). Renzulli indicates that "more (numbers and percentages) creative persons come from below the 95th percentile than above it, and if such cut-off scores are needed to determine entrance into special programs, we may be guilty of actually discriminating against persons who have the highest potential for high levels of accomplishment" (1978, 182).

Intelligence tests also tend to be weighted toward verbal competence. Because of this weighting, cultural and language backgrounds can negatively affect an IQ score (Richert, Alvino, McConnel, 1982). A nonverbal intelligence test may be more appropriate for some populations. Regardless of the type of test used, it should be only one of multiple sources used for assessment.

Isn't it unfair to use one test for some students and another test for others?

No. It is important to use assessment measures that allow strengths of individual children to emerge. A child who does not have command of the English language would be severely penalized by a verbal test in English. Cohen (1988) says, "Minority language students who are not considered gifted may in fact be very gifted, but are unable to express themselves in English." Therefore, nonverbal tests are sometimes more appropriate for some children.

What is an example of a nonverbal intelligence test?

In the Javits project described in this issue, the nonverbal test being used is the Ravens Progressive Matrices. The criticisms about the possible bias on intelligence tests and the current emphasis on nonbiased and least biased assessment have led to the development of intelligence tests that attempt to be more fair to minority groups. The K-ABC is one such test (Kaufman, 1986). According to Kaufman, the K-ABC yields higher scores for African Americans, Hispanic, and American Indian children. Possible reasons for the higher scores are the deemphasis of acquired facts, applied skills, and verbal expression on the K-ABC's intelligence scales and the inclusion of tasks that tap a broader range of mental functions.

Several tests of intelligence are designed to measure intellectual abilities in students from linguistically and culturally different backgrounds. The national report referred to earlier lists such tests.

Other standardized tests, such as achievement tests, are often used in the identification of gifted students. What recommendations do you make concerning these tests and identifying students from diverse populations?

Using rigid cut-off scores to make decisions about identification of students for the gifted program should be avoided when using any test. Additionally, the committee reviewing the data should look at achievement test data with several other factors in mind. By looking at scores from more than one year, gains in achievement can be analyzed. Rapid gains rather than a specific score yield a great amount of information concerning learning abilities of children. Subtests also yield valuable information. Ann Evans deBernard (1985) warns against using English standardized reading tests with Hispanic bilingual children. She states as long as English reading test scores continue to be used as the major criterion for entrance into gifted programs, the cost for many of our brightest bilingual children will be exclusion from the ranks of their cognitive equals. McKenzie (1986) and many others have stated that excessive reliance on standardized tests will cause us to miss some of our most promising students. We should be more concerned about how children learn and their potential learning abilities than what they already know or have achieved.

Some have said that the behaviors or characteristics of giftedness are the same across cultures, but the manifestations may be different. Give me an example.

The following examples reflect how children in different cultures exhibit the same behavioral characteristics. While many children exhibit curiosity by asking repeated questions, Hispanic children may exhibit the same trait by touching and feeling, thus closely examining an object. Perrone and Aleman (1983) reported that children in Puerto Rico seek the advice of their family rather than act independently. "Respect for elders is often valued more than precociousness, which can be seen as disrespectful. Similarly, the Mexican-American child who respects elders, the law, and authority becomes vulnerable in a school system which values individual competition, initiative, and self-direction" (Cohen, 1988).

If I use different assessment measures, will I be able to use the same curriculum or will I have to modify it? Does this mean the program will be diluted?

The underlying premise of providing a program for gifted students is that gifted students are capable of going beyond what is normally provided in the regular school program. Finding gifted students from diverse populations would also indicate that curricular modifications need to be made for these students. Individual needs should be addressed within a program for gifted students and certainly there will be individual needs among gifted students in special populations as well. Sandra Kaplan has often reminded us that the goals and objectives are fixed ends and it is the activities, or "means" to the "ends," that may be modified and adjusted. In fact, there should be multiple means to reach a fixed end.

Emphasis needs to be placed on training bilingual, ESL staff, and special education teachers to assist in meeting the needs of gifted students within their respective populations.

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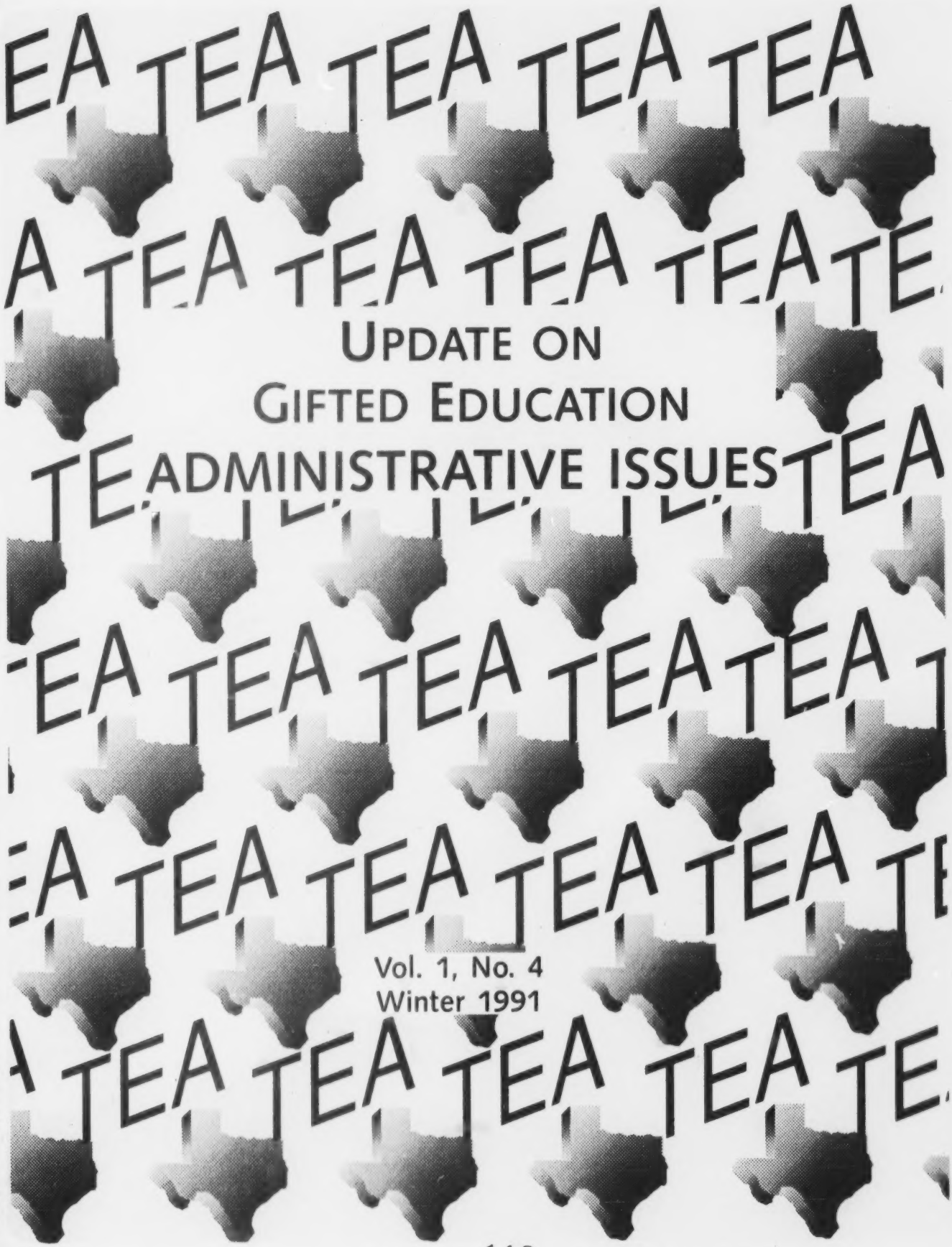

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Winter 1991

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update
on gifted education

VOL. 1, NO. 4, WINTER 1991

Administrative Issues

Administrators are faced with an increasingly complex task. They must develop programs that are designed to meet the unique learning needs of an exceptionally diverse student population. To do this, they must assess student needs and interests using a variety of instruments and procedures. They must work with staff to assure that they are both competent to assume their responsibilities and confident about their ability to be successful. They must determine the appropriate models and environment that enable students to reach their potential.

This month's issue of the *Update on Gifted Education* is designed to offer some assistance to Texas administrators who meet monumental challenges each day. It focuses on some of the major issues that must be addressed—program evaluation, professional development, learning environment, and student grouping patterns. The questions that conclude this issue reflect the questions that are most frequently asked of staff members in the Division of Gifted/Talented Education. As always, any and all of the *Update* can be duplicated.

This issue also marks the conclusion of the first year of this publication. The response to it has been extremely positive and plans for next year have already begun. Should you have any issues that you would like to see addressed in upcoming issues of the *Update*, please do not hesitate to notify our office.

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This publication was developed by Agency staff members in the Office of the Deputy Commissioner for Special Programs.

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Evaluating Programs for the Gifted

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Evaluation of Programs for the Gifted

Q: Why evaluate programs for the gifted?
A: Because we have to.
Q: When is a gifted program "ready" for evaluation?
A: When the program is established.
Q: What do we evaluate?
A: How students have changed and whether the program made a difference.

These answers are the typical responses to program evaluation questions, but they are incomplete answers and fail to reflect the many ways in which program evaluation can be a useful tool in *establishing* quality programs, *helping improve* programs as they evolve, and *assessing our effectiveness* in providing the most appropriate education to gifted students. That is, we can use evaluation to help us in planning, in improving implementation, and in evaluating program impact.

Evaluation for Planning

Too often the evaluation process is only considered after the planning phase of a new program or program component is complete. As an example, we first establish a mentorship program and then we decide that we should evaluate what impact it is having on students. This approach to evaluation is one that fails to take advantage of the full range of benefits that accrue from a carefully planned evaluation. And, unfortunately, these evaluation efforts are often too little, too late. That is, the evaluation is used only to decide whether a program has been successful or not, and the decision is one of "Go" or "No Go" rather than one of how a program can be designed to best meet the needs of the gifted students for whom it is designed.

If evaluation is an integral part of the *planning* for a program, then it provides useful information for (a) documenting the need for a program, (b) justifying a particular program or curricular approach, and (c) documenting the feasibility of a program. For example, if you are

planning a program for gifted students who have particular aptitudes in mathematics, the teachers in your school district may feel that the existing mathematics program already meets the needs of gifted students. The evaluation process—particularly through a needs assessment—can be used to demonstrate that the needs of those students are not completely met by current options. Similarly, if you have decided to adopt a mentorship component for high school students, an evaluation can be used to document that this particular approach will be likely to serve unaddressed needs of the population served and be designed to lead to appropriate, differentiated outcomes. It can also help determine whether a mentorship is feasible by answering such questions as: Is there an appropriate pool of mentors available? Does the staff of the program have the expertise to train mentors and monitor students for a successful mentorship? If not, what staff development activities are necessary? Are there sufficient staff to carry out the necessary administrative details? Will this be an exclusionary program because of the necessity that students provide their own transportation?

Too often, we find that teachers are teaching according to the suggestion of the most recent inspirational presenter they heard at a conference or are using prepared curriculum materials easily purchased through a catalogue. They may adapt plans according to their own sense of appropriate instruction for gifted students rather than in ways that are likely to achieve the goals of the program.

Of course, it is quite possible that evaluation which occurs during planning may well indicate that you have selected an inappropriate model (e.g, a within classroom instructional model will not work if the general teaching staff is unable or unwilling to spend time developing differentiated curriculum) or there is not a sufficient support system in place prior to program implementation. Rather than seeing this as a negative, you should try to use the information to save time, effort, and money. This information assists you in making appropriate plans and modifications that will enable the program to function most effectively and save considerable grief at a later time (and perhaps save the program from elimination).

Evaluation During Program Implementation

Once a program has begun, it is important to evaluate: (a) whether the program is, in fact, being implemented, (b) program strengths and weaknesses, and (c) whether program revisions are necessary. These are, of course, interrelated purposes.

To determine whether the program is being implemented as designed, we must examine the program documentation to determine the intents of the program, the models being used, and the overall design of the program. After that, we must observe and interview program participants to see whether the administrators and teachers are carrying out the program delivery and instruction according to the plan. Too often, we find that teachers are teaching according to the suggestion of the most recent inspirational presenter they heard at a conference or are using prepared curriculum materials easily purchased through a catalogue. They may adapt plans according to their own sense of appropriate instruction for gifted students rather than in ways that are likely to achieve the goals of the program. If the program is to be successful in achieving its goals, it is necessary to identify those instances in which there is dissonance, and either change the goals, the curriculum, or the instruction so that the goals are likely to be achieved.

The most useful aspect of program evaluation is its ability to assist us in identifying program strengths and weaknesses so that we can capitalize on and extend those factors that are contributing to program effectiveness and make changes in those areas that are detrimental to full program functioning. Of course, this ties clearly to the purpose of generating information to use in making program revisions. We are obviously interested in revising our program to strengthen areas currently perceived as weaknesses. For example, are the teachers

operating from a scope and sequence of curriculum that ensures that prerequisite concepts and skills are taught prior to beginning new areas of instruction? If students have the responsibility to implement an independent investigation of a topic, have they learned the requisite library research skills, the skills in evaluating the relative credibility of evidence, the ability to evaluate sources, the ability to interpret statistical evidence that may emerge, the ability to test hypotheses against the data they collect, etc.? Is there a plan to teach these skills as they are needed in the investigation? If not, then we may be sadly disappointed when students do not produce high quality products, and we need to address this weakness in curricular planning.

Evaluation of the "Stabilized" Program: Impact Evaluation

Once a program has "ironed out its kinks," and the program staff have reached some agreement on their goals, and the program is no longer being radically changed from year to year in terms of staff, curriculum, instructional strategy or delivery system, and there is some consensus that "this is it," we can begin to look at the impacts of the program. At this point we are interested in documenting the results of our efforts for (a) relevant stake-holding audiences, (b) funding agents, and/or (c) other potential adopters of the program.

Relevant stake-holding audiences are those who have an investment in the gifted program and whether it "works." Their concerns may arise either because of the effects it has on them (gifted students) or their children (the parents of gifted students). Or they may be concerned because of the effects of the gifted program on their schools (administrators and teachers) or because of their interest in the effectiveness of their instructional efforts (the staff of the program) or because of their interest in cost effective use of educational resources (administrators, board members, etc.). These people are interested in the answers to questions that lead to judgments about whether the goals of the program are being achieved. For example, are students developing independence, self-direction and discipline in learning? Is this development occurring because of this program?

Cost effectiveness and program impact questions are obviously important to funding agents and potential adopters. Those who provide the funds for programs for the gifted are interested in documentation that their money has been put to good use and potential adopters wish to know that their future investments are likely to be profitable.

Evaluation Questions Arising From the Varied Purposes

Each of the purposes outlined above suggests specific evaluation questions that *might* be addressed in evaluating a program for the gifted. (Not all of these questions apply to all gifted programs, but they can serve as examples for program developers.) The following questions are examples of those that may address planning:

> Is the School-wide Enrichment Model likely to achieve the goal of developing creativity in the students we have selected for this program?
>
> Do we have sufficient resource staff to give individual intelligence tests to each nominated student?
>
> Do the teachers selected for our program have enough training in the model selected to make instruction effective?
>
> Is there sufficient support for this program? What needs to be done to generate additional support?

or implementation:

> Do the teachers ask questions at a level likely to challenge students to engage in critical and creative thinking?
>
> Do the teachers modify the regular classroom curriculum and instruction to take into account the achievement level of gifted students? Do they telescope or compact the regular curriculum for these students?

Do parents understand the goals of the program?

or program impact or outcome:

Are students producing "real life" products answering "real" questions and presenting their products to "real life" audiences? Is there evidence that the program produced these outcomes?

Do students exhibit more positive attitudes toward school, self, and learning as a result of this program?

Are students more creative?

Do teachers have more positive attitudes toward giftedness and gifted children?

Have other aspects of the school program improved as a result of the presence of the gifted program?

Deciding On What To Evaluate

The decisions about what should be evaluated in your particular gifted program begin with a thorough examination of your program. You must first determine its organization and principle components, the resources (people, time, money, etc.) expended by each aspect of your program, the kinds of activities that take place, and the expected outcomes of each component. It is impossible to evaluate your program effectively unless you know what your expectations are (were), what activities you believe are ongoing and will lead to the outcomes you have designated, and what resources have been allocated to carrying out those activities. For example, one component of most gifted programs is curriculum development. As that component is described, you should be able to include the expected outcome (e.g, a differentiated curriculum with the following characteristics: requiring more abstract thinking; based on broad-based themes and integrated disciplines; encourages the development of independent or self-directed study skills, research skills and methods, productive, complex and higher level thinking skills; etc.). You will need resources to accomplish that goal. These might include teacher time for training, money to bring in consultants to train, a place for training, money for materials, etc. It will also require that certain activities take place such as staff development training, curriculum development planning periods, etc. If that is the case, then one of your evaluation questions may focus on whether there were adequate funds for the training (ie., Could you hire a person fully qualified for the job?). That is a question relating to resources. Another evaluation question may relate to the activities. Was the time allotted sufficient for the type of training needed for the task? Finally, there may be some outcome questions. Do the teachers understand the principles of differentiating for gifted students? Does the curriculum created by the teachers reflect the characteristics enumerated above? If all of these questions are addressed, one has a better basis for decision making than if one only discovers that the goals of development of higher level thinking have not been achieved. We may find that the curriculum was not appropriate, and therefore, not likely to lead to that end; we may find that the curriculum is inappropriate because the training was inappropriate; and we may find that the training was inappropriate because the person hired to do the training was not the right person.

Discovering that a program needs more money three weeks after budget approval time in an era of declining resources is not as important as discovering which aspects of instruction seem to contribute most to the achievement of program goals.

Of course each component of your program can generate a myriad of questions and you must determine priorities or spend your entire lifetime evaluating! What are some criteria for the selection of evaluation concerns and questions? Worthen and Sanders (1987) provide guidelines to answering this question. First, the question should be of some interest to key audiences. *Someone* should want to know this or you shouldn't waste your time answering that question. Will the answer to the question help in making some decision that is pending? Will the answer yield important information? Is the answer one of enduring importance?

Will the answer have an impact on the course of events? Discovering that a program needs more money three weeks after budget approval time in an era of declining resources is not as important as discovering which aspects of instruction seem to contribute most to the achievement of program goals. Is the question answerable? Will the answer fulfill the requirement of a funding or a governing agency? If the school board wants to know something, find it out!

The Implementation

What has been presented here is an incomplete picture of the evaluation process. I have tried to outline the importance of considering evaluation as a broader, more helpful, process rather than a judgmental process. There are certainly very specific steps to program description, development of evaluation concerns and questions, selecting and constructing instruments, selecting information sources, planning for data analysis, and interpretation of data which must follow. However, if program administrators and teachers carefully consider these front-end steps prior to the formality of engaging in the process of selecting instruments and collecting data, they will be much more likely to produce evaluation data that is valuable, not threatening. It is very important to keep that underlying premise in mind. Evaluation of gifted programs should not be for the purpose of determining whether we need a program or not—after all the gifted kids will be there and in need of a program no matter what we do—evaluation should be for determining how we can do the best that we can possibly do for these students.

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Issues Related to Grouping and Gifted Education

Kathy Hargrove, Ph. D.
Plano Independent School District
Plano, Texas

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Perhaps gifted education's most enduring challenge has been the belief that identification and instruction in special groups leads to elitism. This challenge mirrors a deepseated conflict in American society, the conflict between the ideal of excellence and the ideal of equity. On the one hand, Americans long to be the best, what Renzulli (1991) calls our first "noble goal": "To provide the best possible education to our most promising students so that we can reassert America's prominence in the intellectual, artistic, and moral leadership of the world" (p. 26). On the other hand, we seek fairness of opportunity for all learners and view injustice as an anathema. While these two ideals are equally important and worthy of educators' best efforts, at times they seem in conflict with one another. In our efforts to achieve them, difficult questions are raised. Some of these questions focus on grouping practices.

The current interest in grouping practices is largely centered in the equity issue. For example, an article in the May 1, 1991, issue of *Education Week* headlined "Report Attacks Enforcement of Ability-Grouping Practices," summarizes a new report by the General Accounting Office. Charges are made that about 10 percent of American middle schools "ability-group students in a possibly discriminatory manner" and that minority students are disproportionately represented—or underrepresented—in certain classes "in more than half the nation's school districts" (p. 20).

Similar reports have appeared in both the popular press and the educational journals, with headlines asking "Is Your Child Being Tracked for Failure?" (*Better Homes and Gardens*, 1988) or asserting that "Tracking Students by Their Supposed Abilities Can Derail Learning" (Peterson, 1989, p. 38). The equity issue is a disturbing one to concerned educators and parents. Certainly the specter of racism and discrimination should cause all educators to look critically and carefully at local school district policies and practices to ensure that they are not unfair. Gifted students are distributed across the population, and it is the challenging task of educators of the gifted to

find and nurture all students who need program services. Furthermore, educators of the gifted must be concerned with appropriate education for all students, not just those we identify as gifted.

It is important for those being inundated by a flood of pure opinion and interpretation to be what Allan (1991) calls "critical consumers" of data. Although the primary mission of schools is learning, and although learning is generally measured on standardized tests of academic achievement, much of the literature has focused on the social aspects of grouping. Certainly personal development and group citizenship goals are important. But these goals, worthy as they are, must not be allowed to mask concerns for excellence. When questions about grouping are considered, educators should not limit their focus to either equity or excellence. Rather they should focus on the educational merits as well as the social implications of various grouping patterns.

Further, more than a casual reading of headlines is required to gain an understanding of the issue. For example, the media reported widely on the National Governor's Association education goals for the year 2000. High on their list was a goal to "Challenge educators to eliminate ability grouping and tracking" (National Governors' Association, 1990). But reading beyond the headlines to the entire report reveals that, in fact, the governors said that:

> "Eliminating these practices does not require ending special opportunities for students, such as gifted and talented or Advanced Placement courses. Nor does it mean abandoning special education or remedial programs for those who need special assistance" (p. 17).

Critical readers must go beyond the headline hype to distinguish fact from opinion and to make informed decisions regarding grouping.

What questions should a critical reader ask? What are the real issues in the grouping debate, and how do they relate to the education of the gifted and talented? First, a critical reader must understand the terms being used. For example, many articles use the terms "tracking" and "grouping" synonymously when they do not necessarily mean the same thing. To many educators, "grouping" means the selection or classification, for a relatively short time period, of students for schools, classes, or activities based on ability, achievement, age, learning style, interest, goals, gender, friendship, and so on. "Tracking" implies a much more rigid, long-term assignment from which little deviation is possible. If these distinctions are made, the terms clearly do not mean the same thing and should not be used interchangeably.

Critical readers must go beyond the headline hype to distinguish fact from opinion and to make informed decisions regarding grouping.

One major critic of student grouping is Jeannie Oakes (1985), who claims that the terms are synonymous because in American schools, grouping is not flexible. Therefore, she says, inflexible grouping becomes tracking, and tracking prevents excellence and promotes inequities. When grouping becomes tracking, those responsible must answer to these charges. As long as grouping is flexible, however, it can be appropriate in some situations for all learners, including gifted and high-ability children.

An understanding of other terms that frequently appear in the literature is also important to the critical reader. There are many grouping designs and plans described in the research, and the discerning reader needs to know the meaning of terms like "comprehensive full-day grouping," "between-class grouping," "within-class grouping," and "Joplin plan." The distinctions between these grouping patterns are significant. Slavin is often quoted as being "against" grouping. Yet his landmark 1986 study of regrouping in elementary schools for reading and/or mathematics showed that in five of seven studies, students learned more when they were in regrouped, rather than in heterogeneous classes. He concluded that such regrouping for specific subject areas is effective when students are grouped heterogeneously most

of the day, when they are grouped for specific skill instruction, when students are frequently assessed and regrouped, and when teachers differentiate the materials and pace of instruction (Allan, 1991). Allan (1991) also suggests that at least two other skills are needed by the critical reader: an understanding of the specific methods used in reviews (or in individual studies) and a clear understanding of what research questions are being asked and answered. Using these skills will help the reader understand what is and what is not actually established by a particular piece of research. For educators of the gifted, for example, Slavin's 1986 best-evidence synthesis on grouping is distinguished as much by what he did not ask as by what he did ask. He omitted from the synthesis a review of differentiated programs for both the gifted and for special education because they involved curriculum, class size, resource, and goal changes that made them exceptions to comprehensive grouping plans.

One additional reading skill will be important to the serious student of the grouping literature. In order to detect bias, it is important to know whether the writer has a point of view or is taking a neutral or objective stance. Knowing where the writer stands will help the reader form opinions about the validity of claims or statements that are made and to take them "with a grain of salt." Understanding the bias of an author also will allow the reader to explore many ways of thinking. While it is important to read Renzulli (1991) and Feldhusen (1989) for one viewpoint, it is also important to read Slavin (1986, 1988, 1990) and Oakes (1985) for another.

Once informed about current research, what steps should educators of the gifted take in the real world of educational practice when questions arise about grouping? First, strive to keep discussions about grouping focused on educational rather than political issues. Recognize that the threads of both equity and excellence are woven tightly into the fabric of American society and consider the emotional impact of these patterns. Having acknowledged their significance, shift the emphasis to look at what makes sense educationally.

Second, when grouping decisions are made, make them part of a "grand plan" of instruction that is designed to meet the needs of America's diverse population. Plan for ways to balance equal opportunity for all with nurture for the most able. Remind your colleagues that the same model and level of instruction is rarely appropriate for all students. Strive for a balance in grouping practices.

Third, keep groupings flexible! Permanent groups are a form of tracking. They contribute to overgeneralization and labeling. Some research indicates that rigid homogeneous grouping has lowered achievement and social development for students in low and average groups. Gifted students, too, can suffer in rigid groups. For example, their social development may be impaired if they never have opportunities to interact with their agemates. Instead of inflexible groups, consider various ways to group children and select the most appropriate pattern for a particular learning situation. Such flexibility implies that groups will be reviewed and adjusted as often as necessary and that student assessment is a significant part of the instructional design. In gifted education, the ideas of ongoing identification and regular reviews of student progress are important to assessment. Keep looking for more gifted young people, and keep assessing the developing processes and products of identified children.

Fourth, identify and use significant research findings in designing groups. Allan (1991) identifies five research findings that can be used by educators making decisions on grouping. Several of these are especially important to educators of the gifted. She reports that "gifted and high ability children show positive academic effects from some form of homogeneous grouping," with the strongest effects resulting from acceleration and special classes with trained teachers and differentiated curriculum (p. 64). Furthermore, she notes that average- and low-ability children may benefit academically by regrouping for reading and math (although they show few gains from grouping by ability) and that children are not academically harmed by grouping. Grouping may improve student attitudes toward specific school subjects but not general attitudes

toward school. Finally, she asserts that the evidence of the effect of grouping on self-esteem is, as yet, unclear.

Fifth, consider the teaching staff when making grouping decisions. Involve them in decision-making and in change. Without their enthusiastic and daily support, no instructional design will be effective.

...keep groupings flexible! Permanent groups are a form of tracking. They contribute to overgeneralization and labeling. Some research indicates that rigid homogeneous grouping has lowered achievement and social development for students in low and average groups. Gifted students, too, can suffer in rigid groups.

Remember the potential burden on teachers who are confronted by impossibly wide ranges of student abilities. A child with an aptitude of 140 is as different from the average child with an aptitude of 100 as is the student with an aptitude score of 60. Can teachers be expected to meet the needs of all these children in the same group? Realistically, a teacher with students at many different instructional levels usually teaches to the "average." Other choices are to individualize instruction, to set rigorous and challenging standards, or to modify downwards. Individualization is far too time-consuming for most teachers. Rigorous standards result in frustration for many students. Modifications to the lower end cause underachievement and boredom for higher ability students. Consider teachers when making grouping decisions and provide support for any decisions made!

Sixth, remember your responsibility as an educator to maintain high expectations and provide higher order thinking skills for all children. If instruction is boring and routine, one worksheet after another, passive, and uninspiring *for any student*, it needs to be examined and improved. Encourage the use of active learning strategies and challenging thinking in all groups. Open the doors of learning to as many students as want to enter. "All students, whether grouped or not, should be experiencing a differentiated curriculum that provides options geared to their learning styles and ability levels" (Allan, 1991, p. 65).

Last, constantly remind yourself and your colleagues that gifted students do not take care of themselves. They do have special needs that at times require special instruction, often in a group. Advocates of heterogeneous grouping have claimed that it improves the achievement of children at lower levels because teacher expectations are higher, students receive peer approval, and gifted and talented students can serve as models for less able youths. The same reasons can be cited for grouping gifted students, at least part of the time. When the gifted are grouped and offered a differentiated curriculum, teacher expectations for them are higher. They receive much-needed approval from their intellectual peers. Schunk (1987) reports that "observing similar peers successfully perform a task can raise self-efficacy in students because they may believe that if the peers can learn, they also can improve their skills" (p. 170). Grouping gifted students provides them with worthy models to challenge them to excellence.

Renzulli (1990) writes eloquently of the need to challenge gifted youth:

> "You don't develop the potential of a budding young concert pianist or composer by providing him with ordinary music classes for one or two hours a week. You don't produce future Thomas Edisons or Marie Curies by forcing them to spend large amounts of their science and mathematics classes waiting for someone else to "catch on" or tutoring students who don't understand.... You don't prepare a young man or woman to become a world class athlete by keeping him or her in regular gym classes and by not allowing him or her to compete against other youngsters who can provide appropriate levels of challenge.... You don't develop world leaders such as

> Martin Luther King, Golda Meir, or Mahatma Gandhi by having them practice basic skills over and over again or by mulling over mundane concepts that they can undoubtedly learn faster than most of their schoolmates and, in many cases, even their teachers (p. 34)."

In a society committed to educating all children, advocates for the gifted, along with all concerned educators and parents, must always seek ways to challenge youth to achieve their potential. Many issues surrounding grouping practices deserve thoughtful examination, but educators must not be in too big a hurry to throw out the grouping bath water lest the gifted baby be thrown out, too!

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The articles in this issue reflect a variety of approaches to developing programs for gifted youth. Districts are encouraged to adapt these and other options to meet their local needs.

Thematic-Based Curriculum: THE KEY TO CONNECTED LEARNING

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Nora Woods and Violet Henney are third grade teachers of the gifted/talented at Clark Elementary School in the United Independent School District, Laredo, Texas. They have participated in an International Curriculum Project since 1989, and in October 1990, they spent two weeks teaching in Russia under the expert guidance of Dr. Sandra Kaplan.

Gifted children are not different, but they differ; therefore, the learning experiences or student objectives that these students have must differ to ensure that their needs are met (Kaplan 1990). Learning experiences are greatly enhanced by a stimulating classroom environment. In order to create a total learning environment with differentiated learning experiences, teachers must begin with a universal theme.

In some aspect of their lives, people are drawn to themes every day. It may be the theme song in a movie, the theme of a good book, or the theme for a party. It is no wonder, then, that a theme is an essential part of a differentiated curriculum for gifted and talented students. It is the "heart" of the curriculum, and without it all learning is fragmented. The theme enables us to lock together what we "have to teach" and what we "should be teaching."

The theme used in a differentiated curriculum is one that is broad-based and can relate to all areas of study. It is not a unit-based theme such as "fairy tales" or "dinosaurs." The theme must be an open-ended, universal idea such as "influences," "order," "changes," or "beginnings." If, for example, the theme is "dinosaurs," students would learn only about dinosaurs, and the focus of learning would be narrow, restricting the students from enhancing their learning in related areas. If the theme is "influences," however, the students could find out how dinosaurs have influenced our environment or how our scientists of today have been influenced by the findings of prehistoric fossils. From the study of influences, students learn not only about dinosaurs but how to connect influences to a multitude of other ideas.

Although some districts may consider using a theme per six weeks or semester, we have found it more effective to study only one theme per year in each grade level. This allows students time to internalize an understanding of the theme. One of the best ways to ensure understanding is through room environment.

Developing the room environment around a theme begins the first day of school. Instead of developing bulletin boards on the seasons or on holidays, they are used to expand on the theme. Begin with an empty room and add captions and prompts to help students express ideas in a more professional manner. Some prompts that have been used successfully include "I assume _____ because _____" where students make an assumption based on observations and experiences. Another useful prompt is, "I challenge _____ because _____," which teaches children the value of using factual information to support their statements in group discussions. Finally, students learn the importance of quoting factual information beyond their scope of personal knowledge by using the prompt, "According to _____."

The theme must be displayed in a spectacular fashion so that it is immediately recognized when students arrive. An excellent way to introduce the theme is by having students brainstorm the possible meanings of the theme. The definition of the theme should be displayed in the classroom because it can be used as a reference for clarification of its multiple meanings. Relating the theme to the students' lives at home, in their community, and at school is also useful for building an understanding of the relevance of the theme. Emphasis must be placed on the study of the particular theme rather than on isolated subjects. The theme must be incorporated in lessons whenever possible. Since our curriculum is open-ended, students add the products of the learning experiences to the class all year long. By the year's end, the room environment should reflect the culmination of all learning experiences.

The products found in the learning environment come from lessons that reflect the generalizations related to the theme. A generalization is a big idea with a broad meaning; it is an abstract, open-ended statement that helps foster an understanding of the theme. Throughout the year, students research both inductively and deductively a chain of generalizations that link the theme. Figure 1 lists some commonly used themes and generalizations.

FIGURE 1

GENERALIZATIONS:

Theme: Communications

Generalizations:

1. Communications affect people, places, and things.
2. There are many different types of communication.
3. Communication has a purpose.
4. Types of communication are created and developed in different ways.
5. People and animals are motivated to communicate to satisfy needs.

Theme: Interrelationships

Generalizations:

1. Interrelationships affect people, places, and things.
2. There are different kinds of interrelationships.
3. Interrelationships have a purpose.
4. Interrelationships have both cause and effect.
5. Interrelationships are developed and created in different ways.

Theme: Structures

Generalizations:

1. Structures affect people, places, and things.
2. Structures consist of many and different elements.
3. There are structures inside of structures.
4. Structures are developed or created in different ways.
5. Structures are interrelated.
6. There are many different kinds of structures and different purposes for those structures.

Learning experiences are the keys that unlock the understanding of the generalizations that are linked continuously to a theme. In United Independent School District, learning experiences are created through the use of the following formula, developed by Dr. Sandra Kaplan (Figure 2).

FIGURE 2

Learning Experience = Basic Skill + Thinking Skill + Research Skill + Content + Product

LE = BS + TS + RS + C + P

Note that the formula does not equal the product; instead, the product is an integral part of the learning experience. In the learning experience, the student is given the opportunity to acquire knowledge (content) by developing skills or processes and communicating these through products. The learning experiences are interdisciplinary, which enable students to incorporate more advanced, complex ideas. Every discipline offers research opportunities to students. We research in science by observing, by recording, by experimenting. We research in math by going through the process of manipulating numerical ideas. We also can research by connecting historical studies, causal relationships, and discipline studies. We research by reading, by listening, and by writing (Kaplan 1990).

Through the learning experience, we incorporate critical, creative, and logical thinking skills as well as problem-solving skills. Students are given opportunities to communicate verbally, tactilely, and through illustrations. By doing this, they develop presentation skills so they can share their information.

In the following example, our theme is "Order" and the learning experience (BS + TS + RS + C + P) is based on the generalization, "Order can result in harmony or stimulate conflict." To build this learning experience, we begin with a basic skill or essential element that must be taught. For example, in a lesson that evolves from the social studies discipline, the formula could include the following:

BS = identify multiple causes of events in communities;

TS = make causal relationships;

RS = recognize and use graphs to interpret population changes in cities;

C = negative and positive influences that affect the order of cities;

P = panel discussion to identify ways adversity or harmony affects the order of cities.

The completed learning experience could read as follows:

Identify multiple causes of events in communities past and present. Make causal relationships as to the negative and positive influences that affect the order of cities. Recognize and use graphs to interpret population changes in cities. Hold a panel discussion to identify ways adversity or harmony can change the order of cities.

For an extended learning experience, the same formula can be applied:

Identify multiple causes of events that led to war during three different time periods. Gather data and create a time machine that includes the result of each war in relation to the economical and technological order of the time. Compose newspapers of the different time periods to illustrate that order can end in harmony or stimulate conflict.

After developing a room environment around a universal theme and using learning experiences to understand generalizations, teachers will have provided a curriculum that differs for gifted and talented children.

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Elements of a Quality Staff Development Program

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Dr. Susan Johnsen of Baylor University describes five elements of a quality staff development program that improve the implementation of a comprehensive and appropriate program for gifted and talented youngsters. They include the degree to which the learning activities are integrated into an overall district plan, are related to roles and responsibilities, involve successful teachers, incorporate quality content and instruction, and contain opportunities for continuous and individualized follow-through. Dr. Johnsen is the chair of the Texas University Network of Gifted/Talented Endorsement Programs.

With the mandate in the state of Texas to identify and serve all gifted youngsters in kindergarten through grade twelve, teachers of the gifted are expected to create "educational experiences beyond those normally provided by the regular school program" (*The Texas State Plan and Guidelines for the Education of the Gifted/Talented*, p. 15). According to state rules, a district must "provide a minimum of 30 hours of staff development for teachers of the gifted who have not previously received training in the area of gifted education" (Texas Administrative Code §89.52(a)(2)). This training must be received *prior* to a teacher's assignment in a program for the gifted.

While these requirements are better than none at all, it is presumptuous for an administrator to expect a general education teacher to adapt a classroom to meet the unique needs of children who learn differently with only 30 hours of inservice, not necessarily sequenced or coordinated, or based on varying teacher abilities or weaknesses. In far too many cases, teachers plan their own inservice experiences, snatching days of AAT approved credit from a district or an education service center in their region to meet the requirement. They then return to a classroom with limited material resources, limited assistance from supervisory personnel, limited workshop follow-through, and are asked, as the resident "expert," to conduct workshops for other faculty members, establish an identification procedure for the district, and create a meaningful instructional program for gifted youngsters. In other cases, a school district may plan a 30 hour sequence of workshops on gifted education, requiring attendance of its new teachers of the gifted, and feel that their teachers are now "trained" because they have met the minimum state requirement. To reach the goal of a comprehensive and appropriate program for gifted learners, teachers and other professionals involved in gifted education must have access to a series of coordinated, significant learning experiences that are a part of an overall district plan, relate to their role and responsibilities, and enhance their current level of expertise. The purpose of this article is, therefore, to identify and describe these and other important elements of a quality staff development program.

Element One: Integrated into an Overall District Plan

In 1954 Tannenbaum (1986) surveyed approximately 100 school districts that had implemented exemplary curricula for the gifted in 1941. He wanted to describe what they had learned from their experiences. His unfortunate discovery was that none of the programs even existed 13 years later. As talented teachers and innovative administrators had disappeared, so had the "special projects." He concluded that school districts were more likely to provide projects or "provisions" for gifted and talented youngsters rather than "programs." According to Tannenbaum, a provision is a more fragmented, temporary set of activities, *added* to the general education curriculum, while a program is a more sequenced, comprehensive set of learning experiences, *integrated* into the total school curriculum.

Districts that provide provisions tend to restrict offerings for the gifted to set time periods or after the youngsters finish their "real work." Teachers often require gifted students to make up missed work and little interaction occurs between the general education teacher and the teacher of the gifted. The district more than likely has many other special projects that comprise, comparatively speaking, different parts of a large patchwork quilt with no compatible colors or integrated design. Separate staff development activities occur for the professionals involved in each project with little thought given to conflicting philosophies, goals, or curriculum. Project directors or supervisors expect immediate and successful implementation of all components of the project. The teacher is often torn between pleasing one faction or another with the gifted youngster being the loser. To compensate, the teacher often adopts a "project mentality" or "this too shall pass," and no real change ever occurs in the classroom.

On the other hand, districts that provide comprehensive programs do adapt instruction for the gifted youngster throughout the day. General education, gifted education, and special education teachers, as well as other support professionals within and outside the district such as principals, coordinators, consultants, and university faculty work together in weaving a master quilt. The district may have other special programs but all interrelate and have compatible philosophies, goals, and curricula. In this system, staff development is ongoing and coordinated in a collaborative fashion among professionals from general, special, and gifted education. Change is not viewed as an event, but as a highly personal process in which the individual is given the resources and the time needed to develop the skills necessary to implement a new component of a district-wide program.

In summary, a district should develop a plan by (1) identifying and organizing "planning teams" composed of varying levels of school professionals, university faculty members, outside consultants, and community leaders; (2) creating a future scenario in which all learners, and, in this case, the gifted learner are served in comprehensive and appropriate programs; (3) identifying common and opposing philosophies, goals, and objectives of various programs within the system; (4) identifying the current level of system and classroom practices as they relate to the future scenario and the overall system goals; (5) identifying any discrepancies between the current system and the future scenario; and (6) developing an action plan with common goals to actualize the programs described in the future scenario. If staff development activities are integrated within the overall action plan, the likelihood is greater that a comprehensive program as opposed to a provision will be provided for all gifted and talented youngsters.

Element Two: Related to Roles and Responsibilities

The district's plan should describe the roles that professionals will assume in providing direct and indirect support to the education of the gifted. These roles may include the general education teacher who has gifted youngsters in his/her classroom for part of the day, the teacher of the gifted who provides more specialized programs in resource or magnet school settings, and district personnel who provide material and human resources to support the gifted program such as the

principal, counselor, librarian, and the district coordinator of the gifted program. Quality staff development should relate to each of these roles and their associated responsibilities.

Rogers (1989), for example, describes different levels of training for different kinds of personnel who work with gifted students in a school district. Level One training is designed for all "front line" classroom teachers who adapt for gifted youngsters on a daily basis. This level of training would provide teachers with those skills necessary in adapting instruction in the classroom such as curriculum modifications and instructional strategies as well as relating to parents of the gifted. Level Two training is designed for those who are responsible for providing "curriculum-based" and "student-based" services. These teachers of the gifted may assist in the development of a district-wide scope and sequence and curriculum units for the gifted as well as provide direct services to gifted students. This training would entail a much more thorough understanding of the nature of the gifted learner and curriculum development along with the establishment of an identification procedure and the development of a program at the school level. Level Three training is designed for coordinators, directors, and administrators who are primarily responsible for the design of student-based services for the gifted. This highest level of training would incorporate appropriate previous learning experiences from Levels One and Two and also focus on a systems approach to the development and evaluation of a program for the gifted. Staff development should also be provided for those professionals in auxiliary support roles as well as community volunteers who might act as mentors or specialists in various fields.

In summary, a district should (1) identify the roles of various persons who will be involved in the development, implementation, and evaluation of programs for the gifted; (2) identify the skills and competencies that each of these persons needs to possess; (3) correlate to each competency the level of knowledge and kinds of applications needed to ensure its mastery; and (4) provide sufficient time and practice of full implementation of the identified application. Most importantly, districts must plan staff development experiences for *all* professionals and paraprofessionals who provide either direct or indirect service to gifted youngsters in building a common language and philosophy toward the education of the gifted youngster.

Element Three: Successful Teachers

Any program, and particularly a program for the gifted, should attract the best teachers. The district should design a process for selecting personnel who will have skills that match the varying roles and responsibilities required in the program. While no clear evidence exists that has specifically identified the qualities of a successful teacher of the gifted from a generally successful teacher, certain characteristics tend to occur and reoccur in the literature (Advocate Survey, 1971; Bishop, 1968; Goldberg, 1986; Maker, 1975; Feldhusen & Hansen, 1988; Passow, 1979).

The most frequently mentioned characteristic of good teachers of the gifted falls in the general category of flexibility and openmindedness or openness to change. This characteristic appears consistent with the nature of gifted students and the broad frameworks within which curriculum is developed. A teacher who is bound by daily, highly structured, teacher-paced lesson plans will have difficulty providing for the wide range of differences found in the gifted population.

The second most frequently mentioned characteristic is the appreciation of giftedness. The teacher is sensitive to the creative expression of students, is unthreatened by their superior ability, accepts nonconformity, encourages students to express opinions, and, in general, relates well to gifted students. In an ethnographic study of effective instructional characteristics of teachers of junior high school gifted students, Wendel and Heiser (1989) found that gifted students themselves stressed personal more than skill-related characteristics. They found that the most effective teachers were those who cared for the student as a person and were sensitive to their emotional needs.

Two other characteristics often appear in successful teacher checklists—proven teaching ability and high intelligence. These two seem related to the others in that teachers who are flexible and sensitive to gifted youngsters are more likely to be successful teachers and intelligent. In addition, these kinds of teachers often would be learners themselves—interested in intellectual, cultural and artistic events. This compatibility of interests would enhance their understanding of the gifted youngster and provide ideas for stimulating and imaginative activities in the classroom.

Most researchers have examined the characteristics of teachers who provide direct service to gifted youngsters. Limited research is available that identifies other characteristics that may well relate to a teacher's success in a support role such as curriculum writing, collaborating with other teachers, and providing staff development for other professionals. These various role responsibilities should be considered in the selection process. However, one teacher may not be able to wear "all hats" so a team of teachers may be needed to fulfill all of the role responsibilities.

In summary, a district needs to identify potential teachers of the gifted by establishing a selection process that uses methods focusing on those characteristics most often associated with successful teachers. This process may include classroom observations and interviews with the teacher, his/her students, the principal, and other professional colleagues. A district may select a team of teachers to assume the variety of roles necessary to the implementation of a comprehensive program for the gifted—direct service to gifted youngsters, curriculum writer, collaborator with other faculty, provider of district inservice. No matter how good a staff development program may be, its effectiveness is always determined by the quality of the teachers who participate and who are committed to the education of gifted students.

Element Four: Quality Content and Instruction

While the content or knowledge base of the staff development activities should relate to the district plan and correlated roles and responsibilities, it should also be based on state and nationally recognized competencies in the field of gifted education. For example, professionals in gifted education may choose to acquire an endorsement in gifted education in the state of Texas. This endorsement includes an internship or successful experience teaching gifted youngsters and 12 hours of coursework in the following areas: nature and needs of the gifted and talented; identification and assessment of gifted and talented students; methods, materials, and curriculum for gifted and talented students; counseling and guidance of gifted and talented students; and creativity—theories, models, and applications. These general areas are also recommended in the National Association for Gifted Children's Proposed Professional Standards for Teacher Certification in Gifted Education (Professional Training Institute Committee, 1984). Specific subject matter and competencies are determined by the university or college offering the coursework.

More specific NCATE guidelines have been recommended by the Association for the Gifted (TAG), a division within the Council of Exceptional Children (TAG Board, Council for Exceptional Children, 1989). NCATE is the accreditation agency for teacher education programs. These guidelines include the following general areas:

1. knowledge of commonly used tests of cognitive and affective performance that have application to gifted and talented students;
2. knowledge of assessment processes and the development of an instructional program built upon these processes;
3. knowledge of various curriculum adaptations commonly used for gifted and talented students;
4. knowledge of various administrative or organizational adaptations and community resources in common use with gifted and talented students;
5. knowledge of general characteristics, etiologies, and needs of gifted and talented students from a development perspective and that require educational adaptations;

6. knowledge of special subgroups of gifted and talented students (e.g., underachieving, culturally different, handicapped) that require special identification procedures, planning, and programming;
7. knowledge of models of communication and consultation with parents and key professionals;
8. ability to plan a sequential, differentiated curriculum unit and execute it with a group of gifted and/or talented students;
9. ability to design an educational plan for individuals or groups of gifted and/or talented students that takes into account individual strengths and needs;
10. mastery of strategies or procedures for determining individual strengths and needs with gifted and/or talented students;
11. mastery of procedures or strategies that can determine the degree of success of a program, curriculum plan, and an individual education plan; and
12. ability to work constructively with parents and key professionals;

This subject matter should be tied directly to the identified competencies, roles, and responsibilities of the professionals involved in developing a comprehensive program for the gifted. One way of ensuring this connection is to identify a series of outcomes or products that the participants might develop as a demonstration of the desired skills. For example, the Office of Gifted Education in the Fort Worth Independent School District in collaboration with Baylor University has identified a portfolio of products that their gifted education resource teachers will need to develop to determine their understanding of the course content. The products relate to the teacher's roles and responsibilities and include the following: a case study of a gifted youngster, a school action plan, awareness and identification inservices, an interdisciplinary unit, a scope and sequence, a video of an instructional strategy, a video of consultation and collaboration with other teachers, a video of the classroom, a unit with an affective component, a video of parent consultation and interview, a parent awareness workshop, a specific lesson plan, and a video of questioning strategies. Specific criteria will be applied to each product and evaluated in order to determine individual teacher's strengths and weaknesses. This information will be used in matching the teacher's strengths to a role needed in a district-wide comprehensive program for the gifted. For example, some teachers may be better at curriculum writing or inservice while others may have excellent skills in working with parents and children. In no case does the information relate to job security within the district; in fact, teachers are encouraged to take risks and attempt new ways of adapting instruction and interacting with gifted students.

The manner in which the content is delivered to the teachers should model the kinds of strategies that are desired in the classroom. The instructor should use simulations, role play, debates, interdisciplinary themes, flexible grouping, independent study, creative problem solving, and other strategies in the delivery of the content. In this way, the teachers have experienced a model of possible adaptations that they might transfer in serving gifted youngsters in their own classrooms.

In summary, staff development content and instruction should (1) match nationally recognized competencies in the field of gifted education, (2) match roles and responsibilities of the participants, (3) be outcome- or product-based, (4) match individual teacher's strengths and weaknesses, and (5) model desired strategies. Along with staff development activities provided in an open atmosphere that promote creativity and growth, the district must also provide follow-through activities. This final element will be discussed in the next section.

Element Five: Follow-Through, Continuous and Individualized

The follow-through component is probably the most critical in ensuring the implementation of the competencies presented during the staff development session. Unfortunately, in most cases, follow-through is nonexistent. Teachers are asked to do it on their own

without any support and sometimes even resistance from their supervisors and professional colleagues. This resistance often results from the lack of a comprehensive training plan for all of the professionals who are involved in the process of change. Without training, they are simply unaware of the goals of the program and many even have conflicting philosophies and objectives. In such a case, teachers feel at risk and return to the original practices that are supported in the school building.

Clearly teachers and other professionals need both an opportunity to assimilate the new information and the time to practice the competencies and the new strategies learned during staff development. The follow-up plan should be developed along with professionals who are going to provide future human and material support such as the principal, curriculum supervisors, counselors, and other teachers-in-training. These plans should be individualized for the professional, based upon the practices of the receiving school or system as well as the professional's individual strengths and weaknesses. Figure 1 is an example of a follow-through plan, developed by a professional team in the target area of identification. This plan specifies objectives and a time line that match both the teacher and the receiving school's human and material resources.

While the example does identify the responsibilities of each participating team member in the development of the plan, it does not answer other questions critical to effective follow-through. For example, will the teacher be given time to implement the objectives? Will there be opportunities to solve problems that naturally arise when new strategies or procedures are implemented? What benefits might the professional receive in his/her efforts to implement the follow-through plan? How will implementation time lines and products be monitored and evaluated? These questions need to be answered in the development of the overall district plan.

Professionals involved in staff development activities should have opportunities to get together at weekly or monthly meetings. Some meetings may target the solving of specific problems while others may continue the staff development sequence. Between meetings, a newsletter among staff development participants may provide opportunities to learn of other professionals' successes and struggles. Professionals might receive AAT credit, an endorsement from a university, recognition from their school districts, time to observe in other teachers' classrooms, additional materials for their classrooms, or stipends. The professional might be given the option of selecting any of these benefits from a menu. In this way, the selected benefit would match the needs and interests of the participating professional. For example, Siegl (1986) describes how she provides teaching assistants for all of her teachers during a two-hour block of relief time during lunch and recreation time. This time is used for the informal exchange of ideas, planning, discussion of successes or failures, or just rest. She has found that this time encourages creativity in the teachers.

Monitoring and evaluation may be accomplished by the staff development leader, coordinators within the district, the principal, peer coaches, and/or the teacher himself/herself. For example, Christensen (1986) describes a self-study procedure in which the teacher requests a peer to observe in the classroom when the teacher is ready to demonstrate mastery of a particular strategy. The observing teacher makes written commentary that is reviewed by the members of a follow-through team. This team then makes any recommendations necessary to support the teacher's implementation of the follow-through plan. In no case is the information used as part of the teacher's overall evaluation within the district. Again, changes need to occur in a risk-free environment.

In summary, follow-through is a critical element in successful staff development programs. A team of professionals should develop a follow-through plan that specifies objectives, a time line, activities, responsibilities, and necessary resources. Full implementation is possible only when teachers and other professionals are committed and have the time to solve problems, share successes, and monitor their own progress.

FIGURE 1

FORT WORTH INDEPENDENT SCHOOL DISTRICT
RESOURCE TEACHERS OF GIFTED AND TALENTED

FOLLOW-THROUGH PLAN (1990-1991)

NAME Sarah Meridian **SCHOOL** Samson Elementary **GRADE** 3

ADDRESS Countytown, TX

AREA	LOCALE	TIME LINE	OBJECTIVE WITH ACTIVITIES	RESPONSIBILITY
IDENTIFICATION	CLASS	January 1991	Identify students from my class who may be gifted. Collect products.	Self
	SCHOOL	December 1990	Conduct inservice for teachers in my building in the identification of gifted, particularly special populations.	Self, Consultant from Educational Service Center
	DISTRICT	Fall 1990	Participate in districtwide committee in developing and distributing identification forms; organize staff development activities.	Gifted Committee

This article has attempted to identify the elements of a quality staff development program. The five elements include the degree to which the learning activities are integrated into an overall district plan, are related to roles and responsibilities, involve successful teachers, incorporate quality content and instruction, and contain opportunities for continuous and individualized follow-through. When these elements are present, staff development will be more coordinated, sequenced, and personally significant to participants in their development of a comprehensive and appropriate program for gifted learners.

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Developing a Scope and Sequence for Gifted/Talented Education

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In Lewis Carroll's *Alice's Adventures in Wonderland*, Alice asks the Cheshire Cat which way she "ought to go from here." The cat replies, "That depends a good deal on where you want to get to." Alice indicates that she "(doesn't) care much so long as she gets somewhere." The cat wisely responds, "Then it doesn't matter which way you go."

As more and more school districts decide it is important to determine "where they want to get to" in providing programs and appropriate curricular experiences for gifted and talented students, the development of a quality scope and sequence becomes essential.

As curriculum specialists, the authors have used the Comprehensive Curriculum Coordination Model (C3 Model) of Irving Sato, Director of the National/State Leadership Training Institute on the Gifted and Talented, in the development of quality scopes and sequences for their districts. According to Sato (1990), there are three purposes of any scope and sequence for the gifted and talented. These include (1) the providing of both a psychological order to the gifted student's growth and development and a logical pattern for what is to be learned, bearing in mind the special characteristics of the gifted, (2) the elimination of excessive repetition in the educational experiences of the gifted, and (3) the elimination of gaps in learning for the gifted.

The first step in Sato's (1988) C3 Model is the development of K-12, student directed program goals. Districts should not consider the development of their scope and sequence until this step is completed. Student-directed goals give direction and focus to the program as well as to the curriculum developed for the program. After these goals are in place, however, scope and sequence development can begin. Sato's model, like *The Texas State Plan and Guidelines for the*

*For more information on student goals, see the article "Developing Curriculum for Gifted/Talented" by James L. Coffey in the Summer 1991 *Update on Gifted Education*.

Education of the Gifted/Talented (1990), delineates three necessary scopes and sequences for gifted programs—one for the content to be studied, one for the processes to be mastered, and one for the products to be generated. The authors suggest that districts begin with the development of the **process scope and sequence** for their gifted program.

Process scopes and sequences should be developed for critical thinking skills, creative thinking skills, research and inquiry skills, and affective considerations. Memory, recall, and associative thinking skills may be developed as a fifth process if it is not incorporated within the other processes.

The district must decide what will make up the components of each of the processes listed above. As an example, each district must decide what specific critical thinking skills will be taught. Out of these decisions will evolve the major skills of critical thinking. The district may decide that Solving Problems will be a major skill addressed. However, solving problems is such a broad skill, it must then be broken into sub-skills. For example, "determine problem" and "identify alternatives" are possible sub-skills of solving problems. Next, the district decides on appropriate verbs indicative of the sub-skills. Verbs that reflect the sub-skill of "determine problems" might include conceive, decide, define, formulate. The consequent use of these specific verbs in writing differentiated learning objectives and activities helps ensure that the sub-skill is actually being taught in the classroom.

After the scope of each process skill has been determined in the fashion outlined above, the final step is to sequence the teaching of the sub-skill. The district must decide, based on the needs of their gifted learners, when to introduce, develop, and expect mastery of the sub-skill. As reflected in Figure 1, the process scope and sequence developed by the district is generic to any discipline.

FIGURE 1

_____ INDEPENDENT SCHOOL DISTRICT
GIFTED AND TALENTED EDUCATION
PROCESS SCOPE AND SEQUENCE

KEY

I=INTRODUCE
D=DEVELOP
M=MASTER

PROCESS: Critical Thinking	GRADE-LEVEL RANGES			
	K - 2	3 - 5	6 - 8	9 - 12
1. SOLVING PROBLEMS				
1.1 Determine the problem	I	D	M	
conceive decide define formulate				
1.2 Identify the alternatives				

Similar to the development of the process scope and sequence is the development of the **product scope and sequence**. The district must first determine the categories of products to be generated by their students. Sato's model suggests four categories of products: verbal-written, verbal-spoken, media-visual arts, and performing arts. Once the product categories are decided, the district must determine specific types of products for each category. For example, types of verbal-written products might be poetry and essays. (Note: Some product types can be further subgrouped. For example, poetry can be subgrouped into haiku, couplet, sonnet, etc.; and essays can be subgrouped into descriptive, persuasive, informative, etc.). The district must then decide, based on the needs of their gifted learners, when to introduce, develop, and expect mastery of each specific product. Haiku, for instance, might

be developed in Grade 3. Product scopes and sequences developed by the district may be either generic or discipline-specific, depending on the type of product. Figure 2 shows a sample entry in a product scope and sequence.

Finally, districts would develop a **content scope and sequence**. This scope and sequence directs the teaching/learning of concepts and generalizations rather than of isolated facts. It should be interdisciplinary in nature and organized around themes, problems, or issues.

In developing a content scope and sequence, the district should first decide on the K-12 overarching theme either for the district as a whole or for individual disciplines. For example, the district might first choose from generic themes such as patterns, change, communication, or environment. In deciding to work with environment as a theme, the district then may develop an overarching theme such as "Man and His Environment: The Map for Life." Next, the district should develop the three to five major concepts or generalizations that eminate from the overarching theme. Sato (1990) describes these concepts as "the residue of learning;" and explains that they are the three to five major ideas students should remember long after they have forgotten isolated facts and figures. An example of an overarching concept that might eminate from the overarching theme of "Man and His Environment: The Map for Life" might be "Humans and their environment are interdependent."

The district must then develop themes for each grade-level course, K-12. These themes must support the overarching theme. Using the same overarching theme of "Man and His Environment: The Map for Life," a grade-level theme might be "Environment: Mapping the Way to Survival."

The final step is the development of course or grade-level concepts which help support the district's overarching concepts. Using the grade-level theme of "Environment: Mapping the Way to Survival," a sample grade-level concept might be "Man's social behavior is basic to maintaining, altering, adapting, or destroying the environment."

Thus, the content scope and sequence contains a district overarching theme, district concepts, grade-level themes, and grade-level concepts. (See Figure 3 for a sample entry in a content scope and sequence.)

Once the district has its scopes and sequences written, the road-plan is in place to develop other curriculum products. Sato (1988) encourages the development of course descriptions and unit plans.

FIGURE 2

_____ INDEPENDENT SCHOOL DISTRICT
GIFTED AND TALENTED EDUCATION
PROCESS SCOPE AND SEQUENCE

KEY
I=INTRODUCE
D=DEVELOP
M=MASTER

PRODUCT: Verbal-Written	GRADE-LEVEL RANGES			
	K - 2	3 - 5	6 - 8	9 - 12
1. POETRY				
1.1 Haiku	I	D, M		
1.2 Couplet		I	D, M	
1.3 Sonnet		I, D	M	
2. ESSAY				
1.1 Descriptive	I	D	M	
1.2 Persuasive				
1.3 Informative	I	D, M		

FIGURE 3

District Theme: Man and His Environment: The Map for Life District Concepts 1 Humans and their environment are interdependent 2 3		
GRADE 6 THEME:	GRADE 7 THEME: Environment: Mapping the Way to Survival	GRADE 8 THEME:
	Grade 7 Concepts: 1. Man's social behavior is basic to maintaining, altering, adapting, or destroying the environment. 2. 3.	

Unlike Alice in Wonderland, school districts should care about where the curriculum for their gifted and talented students is going. The development of scopes and sequences for processes, products, and content will provide clear direction and, when implemented, will ensure a comprehensive, coordinated curriculum for the district's gifted and talented students.

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Q&A ADMINISTRATIVE ISSUES

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Texas Education Agency

I'm not certain I understand exactly what staff development teachers of the gifted have to have. Do they need an endorsement and, if so, can they be grandfathered into the program?

Section 89.52(a)(2) of the Texas Administrative Code requires that teachers who teach in the program for gifted students receive a minimum of 30 hours of appropriate training. It is up to the district to determine what training will best support the program and to maintain records verifying that the 30 hour standard has been met. Many professional development opportunities are offered throughout the year by regional education service centers, by national consultants, by the Texas Education Agency, by professional associations, or by local district staff. While districts may select from any of these possibilities, it is most important for the training to support teachers in their instruction of advanced level students.

All training should be provided prior to the teacher's assignment in the program. It is understood, however, that circumstances may arise in a district and one or two of the teachers will not have the required training in advance. In these instances, the district should determine what the professional development needs of the teacher are and provide the training as soon as possible. The rule also states that additional training should be provided based on the needs of staff.

No endorsement is needed to teach in the gifted program although there is a voluntary endorsement that is offered by over 20 Texas colleges of education. The endorsement requires a minimum of 12 hours of university courses, plus a three-hour practicum. Two years of experience in a program for gifted students may take the place of the practicum. Educators who are interested in the endorsement should contact one of the colleges or universities listed in Figure 1.

In a small district, is it permissible to have a secondary school teacher teach all grade levels of the program?

Some districts with under 1,000 students enrolled in schools have requested waivers to have a teacher certified at one level teach all levels of the program. Those waivers have been granted if the program is a pull-out program and the teacher is not responsible for grades in any content area, and if the teacher has received or is working on his or her endorsement in gifted education. In other cases, it is expected that teachers will be assigned according to the level of their certification.

I still am not certain when I have to identify kindergarten students for the program. Please clarify.

The law states that students must be identified and served at each grade level. In cases other than kindergarten, services should begin at the start of the school year for students previously identified. At kindergarten, districts are encouraged to assess all students to determine their strengths. Assessments

FIGURE 1

COLLEGES/UNIVERSITIES THAT HAVE BEEN APPROVED TO OFFER THE GIFTED/TALENTED ENDORSEMENT

1. Baylor University
   Dr. Susan Johnsen
   (817) 755-3111

2. Corpus Christi State University
   Dr. Don Joiner
   (512) 991-6810

3. East Texas State University
   Dr. Joyce Miller
   (214) 886-5604

4. Hardin-Simmons University
   Dr. Bertie Kingore
   (915) 670-1353

5. Lamar University
   Dr. Dorothy Sisk
   (409) 880-8046

6. Laredo State University
   Dr. Rosa Maria Vida
   (512) 722-8001

7. Midwestern State University
   Dr. William Barber
   (817) 692-6611, ext. 4140

8. Sam Houston State University
   Dr. George Hobbs
   (409) 294-1101

9. Southwest Texas State University
   Dr. Marilyn Gaddis
   (512) 245-3104

10. Stephen F. Austin State University
    Dr. Thomas Franks
    (409) 586-2903

11. Sul Ross University
    Dr. Patti Trietsch
    (915) 837-8170

12. Tarleton State University
    Dr. Virginia Bazil
    (817) 968-9089

13. Texas A & M University
    Dr. William Nash
    (409) 845-1802

14. Texas Tech University
    Dr. Deborah Milosevich
    (806) 742-2353

15. Texas Woman's University
    Dr. Marnell Hayes & Dr. Robert Sloat
    (817) 898-2271

16. University of Houston
    Dr. Theresa Monaco
    (713) 749-7407

17. University of Houston—Clear Lake
    Dr. Dennis Spuck
    (713) 488-7170

18. University of Houston—Victoria
    Dr. Diane Prince
    (512) 576-3151

19. University of North Texas
    Dr. Fred Thomas
    (817) 898-2271

20. University of St. Thomas
    Dr. Jean Lantz
    (713) 522-7911

21. University of Texas at Arlington
    Dr. Judy Reinhard
    (817) 273-7170

22. University of Texas at Austin
    Dr. Ann Corn
    (512) 471-7255

23. University of Texas—Pan American
    Dr. Ralph Carlson
    (512) 381-3466

24. University of Texas—Tyler
    Dr. Brenda Gilliam
    (903) 566-7055

25. West Texas State University
    Dr. Jim Kidd
    (806) 656-2600

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may include teacher, parent, and peer recommendations, teacher observations of planned lessons, review of student products, as well as other indicators. Students should be identified by March 1 of each year, with ongoing assessment continuing throughout all grades.

Some districts are requesting waivers from the kindergarten program and developing talent pools that permit more time for the assessment process. In these cases, students are assessed at the very end of kindergarten, with formal services beginning in the first grade.

The issues relating to ability grouping and tracking seem to be raising some concerns about providing programs for gifted/talented students, honors classes, and Advanced Placement classes. State law mandates that we identify and serve gifted students. What are some ways we might resolve this issue?

Hopefully, the article by Dr. Hargrove in this issue of *Update on Gifted Education* has helped clarify some of the concerns about grouping. This is an emotional issue and perhaps a philosophical one as well. In efforts to restructure schools and improve the achievement level of students, many reformers have recommended the elimination of advanced level classes and replacing these classes with heterogeneous grouping. This practice, however, does not reflect research findings related to gifted students. After completing an extensive review of the research, Dr. Karen B. Rogers, University of St. Thomas in St. Paul, Minnesota, provides six recommendations for practices involving ability grouping.

- "Guideline One: Students who are academically or intellectually gifted and talented should spend the majority of their school day with others of similar abilities and interests."
- "Guideline Two: The cluster grouping of a small number of students, either intellectually gifted or gifted in a similar academic domain, within an otherwise heterogeneously grouped classroom can be considered when schools cannot support a full-time gifted program (either demographically, economically, or philosophically). The "cluster teacher" must, however, be sufficiently trained to work with gifted students, must be given adequate preparation time, and must be willing to devote a proportionate amount of classroom time to the direct provision of learning experiences for the cluster group."
- "Guideline Three: In the absence of full-time gifted program enrollment, gifted and talented students might be offered specific group instruction across grade levels, according to their individual knowledge acquisition in school subjects, either in conjunction with cluster grouping or in its stead."
- "Guideline Four: Students who are gifted and talented should be given experiences involving a variety of appropriate acceleration-based options, which may be offered to gifted students as a group or on an individual basis."
- "Guideline Five: Students who are gifted and talented should be given experiences which involve various forms of enrichment that extend the regular school curriculum, leading to the more complete development of concepts, principles, and generalizations."
- "Guideline Six: Mixed-ability cooperative learning should be used sparingly for students who are gifted and talented, perhaps only for social skills development programs."

Dr. Rogers' research is supported in a document entitled *Policy Perspectives: Increasing Achievement of At-Risk Students at Each Grade Level.* The document is coauthored by James M. McPartland and Robert E. Slavin and is published by the U.S. Department of Education. McPartland and Slavin cite the following as an alternative to schools struggling with this issue:

> "Retain separate offerings for gifted students, limited English proficient students, and special education students at each grade level..."(p. 21).

If you would like more information about the document or Dr. Rogers work, contact the Division of Gifted/Talented Education. Dr. Rogers will be a presenter at the institute on Developing Critical Thinking in Gifted Students, February 16-18, 1992, at the Hyatt Regency Austin.

Students in my district attend seminars for gifted/talented students at the regional education service center. I have received various interpretations regarding whether or not these student absences should be counted against the ten-day extracurricular absence rule. Please clarify.

Chapter 75.4(b)(2)(A) states that "School districts may modify the delivery of instruction for gifted and talented students by accelerating, providing greater depth, and expanding the essential elements described in this chapter." As long as students participating in the gifted/talented program continue to demonstrate an acceptable degree of mastery of the essential elements, they may participate in programs such as seminars, mentorships, and independent study opportunities designed to enhance their academic program without having such participation count as an absence pursuant to 19 TAC Section 97.113. Students should not participate in seminars if they will be absent from a class in which they are not demonstrating mastery of the essential elements.

Occasionally in my district, for various reasons, a student identified as gifted does not participate in the program offered. Do I count the student on information submitted to PEIMS? Also, must the student be exited from the program if he/she chooses not to participate one year?

Funding for services in gifted education is based on the number of students identified *and* served. Monies are disseminated based on information provided to PEIMS; therefore, a student who is identified, but not being served in the program would not be included on PEIMS.

In cases such as scheduling conflicts or serious illnesses, students may have good reasons for not participating in challenging opportunities designed to meet their needs. In such instances, students do not have to be exited from the program if the district adopts a furlough policy. Furlough policies enable students to temporarily leave the program for a designated period of time. This is also particularly useful for students who have overextended themselves and are suffering from stress due to increased responsibilities. Students on furloughs also are not included in PEIMS counts.

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